CHAPTER V

ERROR ANALYSIS
CHAPTER-V: ERROR ANALYSIS

5.1 Aim

The present chapter aims at highlighting the errors committed by the learner. All those errors identified have been systematically classified and analysed in the following pages. Most of the language specific problems in learning have been identified through these errors.

The data for this analysis have been extracted from the materials collected in connection with the testing of two of the four skills of language learning, namely, proficiency in writing skill and speaking skill. Though no separate data were collected for this study, the data collected in connection with the analysis of the proficiency of the learners serve as a very good basis for the present study. Hence, the data collected in the proficiency test have been used for the analysis of errors committed by the learners also.

The performance of the learners in the writing skill is compared with the grammatically correct forms and the errors have been identified. These errors were listed in a separate sheet and classified under different headings. A major classification of the errors committed by the learners in the writing test leads to the division of errors into two types, namely, 1) dictation errors and 2) free composition errors. Each one of these two major categories of the errors can further be divided into different sub-categories. Errors committed by the learners
in their speaking have also been identified and analysed in the following sections.

5.2 **Contrastive Analysis**

The systematic comparison of specific linguistic systems of two or more languages is the general definition of contrastive analysis. This was developed and applied in the 1950s and 1960s, by structural linguists to language teaching. Contrastive analysis is based on the following assumptions:

1) the problems involved in learning a new language are caused by the interference of the first language

2) the number and kinds of problems a learner encounter while learning a new language are predicted by the contrastive analysis

and 3) contrastive analysis could be used
   1) to help easy learning of L2 and
   2) to prepare effective teaching materials

Theo van Els et al (1984:38) point out the following objectives attributed to contrastive analysis:

1) providing insights into the similarities and differences between languages

2) explaining and predicting problems in L2 learning

and 3) developing course materials for language teaching

Lado (1957:VII) makes the following observation in relation to the
comparison of the two languages:

".... the comparison of any two languages and cultures to discover and describe the problems that the speakers of one of the languages will have in learning the other."

He also emphasizes that a teacher has a greater role to play in teaching. He should not only know the structural differences between languages but also the functional and contextual (cultural) differences reflected by the languages while teaching the L2 to a learner.

So, different types of course materials and different types of teaching techniques should be followed for different language speakers. Though it cannot be followed at the middle or high school level, at least at the primary level (context based course materials and teaching techniques) can be followed in order to improve the literacy rate. So, contrastive picture of languages will have a greater role to play in primary level teaching. Researchers in contrastive analysis like Lado (1957) and Fries (1957) have done their research based on the comparison of L1 and L2, in learning environment.

Contrastive analysis based teaching should take into account both the psychological aspect of teaching (i.e. based on the behaviourist learning theory) and the linguistic aspect of teaching (i.e. based on the structural linguistic theory). In these aspects mentioned above, the important teaching technique is to know how to use one particular
language in different social contexts. Without the knowledge of the social contexts one cannot predict the learning efficiency of the students.

In earlier studies several people have pointed out that language learning and teaching involves the application of behaviourist learning theory, and the use of the selected L2 material. In other words, language teaching involves the presentation and representation of specific learning material so as to facilitate language learning. Contrastive analysis is closely related to language teaching techniques and language teaching materials. The differences and similarities found between L1 and L2 are identified through the contrastive analysis.

If L1 and L2 have similar structures then the repetition drills need not be used extensively. The similarity of the structures of the two languages involved demand less number of exercises in repetition drills. If, on the other hand, L1 differs considerably from the structure of L2 then it is essential for a teacher to exploit the technique of repetition drill to the maximum. In this manner the teaching techniques used depend upon the nature of the structures of the languages involved.

The following diagram (5.1) provides the feedback mechanism involved in teaching, taking into account the contrastive information.

In L2 learning / teaching both behaviourism and structuralism play major roles. Lado (1971:2) gives the following opinion in this regard:
Diagram 5.1: Feedback Mechanism Based on CA

Problems
Remedial Teaching
Problems
Teaching
Course Material
CA
L1
L2
"Those elements that are similar to this native language will be simple for him, and those elements that are different will be difficult."

So the teacher should compare the learners' language (L1) with the language (L2) he/she is trying to teach. The places where there are differences in the structures of the two languages involved must be given special attention while teaching. For this activity contrastive analysis will be quite indispensable.

Transfer of learning / Transfer and Interference are the two basic aspects of contrastive analysis.

5.2.1. **Transfer of Learning**

In learning situation the effect / influence of one language on the learning of another is generally referred to as Transfer of Learning. When the pre-school children enter into the entry level of the school, their home language (L1) will have dominance over their school language (L2). Here it is meaningful to note Corder's (1973:132) statement about transfer of learning. He says:

"..... some of the rules they already know are also used in the production and understanding of the second language. This is what is meant by 'transfer'; learners transfer what they
already know about performing one task to performing another and similar task".

Broadly speaking, L1 will have its dominance over the L2 in any context or level of L2 learning. Two types of transfer of learning may occur. One is Positive Transfer and other Negative Transfer. Positive Transfer is known as facilitation and Negative Transfer is known as interference.

5.2.1.1 Positive Transfer/Facilitation

When both L1 and L2 have similar forms/structures, L2 learning becomes easier and because of the easiness in transfer of language items, the phenomenon is called Positive Transfer. In other words, when L1 habits are helpful in acquiring/learning the L2 habits, positive transfer is supposed to occur. Corder (1973:132) describes this transfer as:

"where the nature of the two tasks happens to be the same, of course, this tendency to transfer is an advantage. This is called 'positive transfer' or facilitation".

The following examples show the occurrence of positive transfer in the tribal L2 learning situation in the Nilgiris.

1) avan ni:ra:tukira:n 'he bathes'
2) amma: ko:lam varaikira:l 'mother draws kolam'
In the first example even though the expected Tamil sentence is \textit{avan kulikkiran} the sentence produced by the Kurumba student viz., \textit{avan ni:ra:tu:kiran} is not considered as an error.

It is interesting to note here, that the Kurumbas generally use the word \textit{ni:ra:tu} to refer to bathing. It has to be further noted here that the word \textit{ni:ra:tu} which is found in Tamil also is an archaic form and in modern Tamil it is used in religious parlance only. The similarity of the verb \textit{ni:ra:tu} 'to bath' in these two languages function as a factor for 'positive transfer'.

Similarly, in the second example also we come across an instance of positive transfer. The Paniya sentence is \textit{amma: ko:lam varaikiran} and its equivalent in Tamil is \textit{amma: ko:lam po:tukiran}. In these two sentences, the Paniya language uses the word \textit{varai} instead of the normally expected word \textit{po:tu} which means 'to draw'. Thus it is seen that Paniya uses the word which is used only in the written variety of the Tamil language. We, therefore, conclude that the usage of the word \textit{varai} in Paniya to refer 'to draw' is an instance of positive transfer.

5.2.1.2 Negative Transfer/Interference

When L1 habit hinders the learner in learning L2, the hindrance is called as negative transfer/interference. In other words, differences between the two languages lead to interference and ultimately lead to the
creation of learning difficulties. Weinreich (1953:1) has given a definition of interference in the following lines:

"Those instances of deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language, i.e. as a result of language contact".

This interference may be reflected in performance of the learner in L2. The units which reflect the interference of L1 on L2 are phonological, morphosyntactic and lexical. Moreover, Weinreich (1953:1) has made an assumption about learning. The following explains the same:

"The greater the difference between the two systems, i.e. the more numerous the mutually exclusive forms and patterns in each, the greater is the learning problem and the potential area of interference".

From the observations of Weinreich, it can be assumed that whenever the structures of L1 and L2 differ, then there is chance for the learner to err in his L2 learning process. The nature of the errors committed by the learner depends essentially on the structure of L1. In other words, the errors in L2 may be explained by employing the notion of negative transfer which is nothing but interference.
The following examples reveal the erroneous constructions which occur in the writings of the tribal children of the Nilgiris which are due to the negative transfer/interference. The erroneous forms are presented with an asterisk(*) symbol throughout this study.

1. \textit{pu:nai na:yaitturattukiratu} 
   \textit{(a) cat chases the dog}  
   \textit{* 1.(a) pun:nai na:yma: turattukiratu} 
   \textit{* 1.(b) pu:nai na:yna: turattukiratu} 

2. \textit{paiyan pamparam vilaiya:tukira:n}  
   \textit{'the boy plays (a) top'}  
   \textit{* 2(a) paiyan pamparam tirikkira:n} 
   \textit{* 2(b) paiyan pamparam vitukira:n} 

3. \textit{oru pen pa:ṭikkira:l}  
   \textit{'a girl studies'}  
   \textit{* 3(a) oru penṭa:ṭi paṭikkira:l} 

4. \textit{ciṅkattinai ma:ṭukaḷ pa:ykinrana/ turattukinrana}  
   \textit{'bulls chase the lion'}  
   \textit{* 4(a) cimkattine ma:ṭukaḷ turattukinrana} 
   \textit{* 4(b) cinka:vai ma:ṭu turattukiratu} 
   \textit{* 4(c) cinkane ma:ṭukaḷ turattukinrana}
In the examples 1(a) and 1(b) the occurrence of the accusative case markers -ma, -na are due to the influence of L1, and so these constructions are treated as examples of negative transfer.

In the examples 2(a) and 2(b), the use of the verb tirikkira:n and viṭukira:n show the occurrence of negative transfer. tirikkira:n which is taken from Paniya by the student is being used in the Tamil construction. Similar is the case with the selection of the verb viṭukira:n. This error occurs in the data of the Paniya student.

In the third example 3(a) an error occurs due to the wrong substitution of peṭa:tṭi in the place of peṇ. This error in the writing of the Irula student occurs because peṭa:tṭi in Irula refers to a girl or woman and not to wife as in Tamil.

In the fourth example, the errors in sentences 4(a), 4(b) and 4(c) are due to the modification of the root form of the word cinkam and the use of the accusative case markers. In example 4(a), -e is used as the accusative case marker. This is due to the influence of the spoken language. Also, the word cinkam is erroneously written as cimkam. In 4(b) the noun cinkam is modified as cinka:. The inflectional increment -tt- and empty morpheme -in- are ommitted. But a glide -v- has been inserted. In 4(c) the noun cinkam is modified as cinkan. The inflectional increment -tt- and empty morpheme -in- have been ommitted. The case suffix -ai is modified as -e due to influence of the spoken language.
5.3 **Error Analysis**

At one juncture in the history of applied linguistics, behaviourism and structuralism were used as theoretical models governing the learning and teaching practice. Emphasize was given to teach language through oral-aural practice and pattern drill practice. Teaching of the language structure alone was considered as the thrust area in language teaching. The errors an L2 learner committed in the units and structures of the L2 were interpreted purely on the structural basis. One of the causes for the existing errors in L2 is the interference of L1 structure on that of L2.

So, some applied linguists felt that a contrastive study of L1 and L2 structures not only help the language teachers to identify the favouring and interfering structures in L2 learning but also to help the teachers to design the curriculum and the teaching materials and also in the gradation of the teaching materials.

One of the important factors which the contrastive analysis fails to account is that the L2 learner commits errors which are not only due to the interference of L1, but also due to the learners' misapplications of the use of the innate ability to organize the materials they learn. Chomsky's research on language acquisition tries to establish the existence of an innate Language Acquisition Device (LAD) in every learner whether he is L1 or L2 learner. With the help of the LAD
every learner cognitively creates structures of his own from the input language materials he comes across through certain cognitive processes like induction, over generalization, over differentiation, analogy, etc. The cognitive structure thus constructed by a learner is said to compose the inter-language of the learner.

So applied linguists instigated by Chomskyan explanation of language acquisition process felt that a mere contrastive study of L1 and L2 structures only reveal the structural difference of L1 and L2 alone, but not the cognitive capacity of the learner and its role in the learning of L2.

This is the sole reason for the development of the attention given to the identification of cognitive structures and the subsequent development of error analysis in applied linguistic research. It is assumed by some of the applied linguists that by analysing the errors committed by the learners while learning L2, one could identify the cognitive strategy applied by L2 learners. On the basis of this, one can identify and establish universal strategies and principles involved in L2 learning. Thus error analysis and cognitive interlanguage research revolutionized applied linguistic research and paved the way for a new dimension in applied linguistics, thanks to Noam Chomsky.

5.3.1 Error and Mistake

While speaking or writing an L2 in the course of an L2 learning, the use of words or grammatical features showing faulty or incomplete
form may occur. Incomplete knowledge is the main reason for the occurrence of such errors. The occurrence of mistakes, while speaking or writing may be due to the lack of attention on the part of a learner. Sridhar (1981:224) has attempted to distinguish mistakes and errors in the following definition which is based on Corder's (1967) work.

"Mistakes are deviations due to performance factors such as memory limitations (e.g., mistakes in the sequence of tenses and agreement in long sentences), fatigue, emotional strain, etc. They are typically random and are readily corrected by the learner when his attention is drawn to them. Errors, on the other hand, are systematic, consistent deviances characteristic of the learner's linguistic system at a given stage of learning."

Generally, unsystematic wrong items occurring sporadically in speaking or writing may be called as mistakes, and systematic wrong items occurring uniformly in all contexts of speaking or writing may be called as errors. In other words, mistake is connected with language competence or grammatical competence. However, it is difficult to identify which one is a mistake and which one is an error. Even the researcher should work hard to identify whether one is a mistake or an error. Sometimes it may be correct and sometimes it may be wrong. But if the researcher asks the students to write / speak out a particular word / sentence several times, the researcher may be able
to come to the conclusion at least through an average count whether one is an error or a mistake.

5.3.2 Error Analysis and Its Uses

Errors are an important source of information to decide the learners' strategy in learning and are found in the learners' output. The teachers come to know how the learners struggle to learn L2 while learning it for communicative purposes. A look at the various kinds of errors L2 learner make will guide the teacher not only to identify the problematic areas of L2 learners, but also to spot out areas for which remedial programmes and materials are needed. So the error analysis not only finds out and classifies the errors in L2 learners' output, but also tries to interpret the learning strategy of the learners. Error analysis also helps in the selection of teaching items and those items which require emphasis in order to devise remedial materials and testing materials needed.

Sridhar (1981:221-222) has pointed out the following in connection with error analysis and its use in language teaching:

"It was believed that error analysis, by identifying the areas of difficulty for the learner, could help in (i) determining the sequence of presentation of target items in text book and class room, with the difficult items following the easier ones; (ii) deciding the relative degree of emphasis,
explanation and practice required in putting across various items in the target language (iii) devising remedial lessons and exercises; and finally, (iv) selecting items for testing the learner's proficiency."

Generally it is felt that error analysis is a primary pedagogical tool. In the current trend in language teaching, experts say that the education system should be changed and should be learner-oriented, not teaching-oriented. In order to achieve learner-oriented education and make such a process successful, the teachers should study the problems learners face in different levels of learning context. This involves a close evaluation of the text book materials also. All the text book materials and syllabi we find in target teaching curriculum may not be perfectly suitable to the learners, if the focus or attention is given to learner oriented language teaching. Thus the theoretical aspects of error analysis will provide some insights into the nature of language teaching strategies a learner follow.

The role of teaching is to develop competence - both grammatical and communicative, in the learner. For this, the planners and teachers should analyse the errors and make steps to correct the errors which will reflect the deficiency in the competence of the learner.

David Horner (1988:218) has given some interesting suggestions regarding error correction in language teaching situation. He has suggested that allowing the learner to correct his own errors may be
extremely effective in order to make the learner able to stand on his own leg out side the class room. Further, David Horner has suggested three principles involved in the correction of errors. They are:

1) Correct the out-put of the students if it appears to have some effect

2) Do not correct overtly. In case the learner can not self correct, try other members of the class.

3) Do not try to correct everything. The students are learning the language to be able to communicate with out side world. So the primary concern is with errors which render communication difficult.

He also suggests that self correction, correction of other learning members and teacher correction as the three modes of correction to be adopted in the order given above. While the teacher correcting the errors of students, it is better for the teacher not to assume the role of a strict teacher but that of a common man.

Mackey clearly points out various reasons governing the learner committing the errors which a sensible teacher could understand. He also points out three kinds of situations in which a learner stays with reference to error perception and correction. The following quotation from Mackey (1967:369) illustrates the above:

"Techniques of correcting are some of the most important of classroom techniques. The teacher may first try to diagnose
the cause of the error. The error may be due to a transfer from the native language, an analogy with something correctly learnt in the foreign language, a wild guess, vagueness in remembering the right form or general lack of accuracy and language skill ...... In the correction of errors there are three possibilities for the learners: he may hear his error and correct it; he may hear it and not correct it; and he may neither hear it nor correct it.

A close scrutiny of the above observations made by the scholars working in the field of language teaching shows that error analysis/error detection, correction, etc are not only associated with the teacher but with learner also. Both the teacher and learner should together involve in the detection, analysis and correction of the errors occurring in the teaching situation and monitor the whole process involved with the help of various techniques. This holds good not only in L2 learning situation but also in L1 and bilingual learning situations.

Error analysis is considered as one of the important aspects of applied linguistic research, because it sheds considerable amount of influence over learning, teaching (production and comprehension), testing and evaluation in materials production. The following are some of the uses of error analysis in language teaching curriculum:

1) Error analysis is useful to rectify the errors, to give remedial practice and prepare lessons keeping in mind the nature of errors committed by the learners.
2) Error analysis is useful in testing the arrangement of materials in the syllabus.

3) It provides information regarding the materials required for developing communicative efficiency. It is useful for evaluation of the text book design and for the evaluation of deficiency of the text book.

4) It helps to identify the level of linguistic and communicative competence of the learner.

5) It helps to identify the influence of L1 while learning L2.

6) It is also useful to deduct the amount of interest learners show on L2 learning.

7) It is useful to locate the problematic areas of the learner in L2 learning process.

8) It functions as a guide to the teacher in organizing the teaching method in an efficient way.

5.3.3 **Steps in Error Analysis**

Various steps are involved in undertaking error analysis. Sridhar (1981:222) refers to the following steps for error analysis. They are:

1) collection of data

2) identification of errors

3) classification of the types of errors

4) statement of relative frequency of error types

5) identification of the areas of difficulty in the target language
and 6) providing remedial drills, lessons, etc.

Generally speaking in error analysis,
1) collection of errors
2) classification and description of errors and
3) detecting the source of the errors
are considered as the major steps.

5.3.3.1 Collection of Errors

Errors may be collected either from a free composition or dictation answers given by the students or from the answer papers or class/home work note books. For the collection of errors one need not give more attention to the data coming from a guided composition and memory passages because one cannot find more errors from the above.

The reason for the occurrence of the comparatively less number of errors in guided composition and memory passage is that the teacher plays a major role and the students a minor role in these tests.

5.3.3.2 Classification and Description of Errors

On the basis of the language structure the following classification of errors may be attempted:
1) graphological or script-based errors
2) grammatical errors
Grammatical errors can be classified further on the basis of the errors into the following categories:

1) nouns
2) different types of verbs
   2.1 intransitive
   2.2 transitive
   2.3 passive
3) adjectives
4) adverbs
5) numbers
6) genders
7) tenses
8) concord
9) relative participles
10) verbal participles

Corder (1971) classifies errors into two types, namely,
1) errors of competence and
2) errors of performance.

He also says that L2 learners can recognize and correct errors of performance, but not errors of competence. This can be taken as a
Theo van Els et al. (1984:52) have approved the distinction between errors of competence and errors of performance pointed out by Corder in the following way:

"errors of competence are the result of the application of rules by the L2 learner which do not (yet) correspond to the L2 norm; errors of performance are the result of mistakes in language use and manifest themselves as repeats, false starts, corrections and slips of the tongue".

Theo van Els et al., however, modify the proposal of Corder. They have classified the error of competence as interlingual and intralingual, and each will be further classified as phonological, morphosyntactic, and lexical errors. Here it is worthwhile to represent the diagrammatic explanation given by Theo van Els et al. (1984:53).

(Diagram - 5.2 Classification of Errors)
According to the diagram (5.2) the errors may be classified as:

1) interlingual phonological errors
2) interlingual morphosyntactic errors
3) interlingual lexical errors
4) intralingual phonological errors
5) intralingual morphosyntactic errors
6) intralingual lexical errors and
7) errors of performance

5.3.3.3 Sources of the Errors

Nadaraja Pillai (1981:47) has given a classification of the various causal factors or sources of the errors. According to him, sources of the errors are the following:

1) Overgeneralization
2) Over extension of target language rules
3) Interlanguage interference
4) Mother tongue interference
5) Filter language interference
6) Simplification of errors
7) Induced errors
8) Deficit learning
5.4 Classification of the Data

In this study the errors committed by the learners in the writing and speaking skills alone are taken up for analysis. The errors committed in the writing and speaking skills have been further classified into two categories as detailed below:

1) **Writing errors**
   1.1 dictation errors
   1.2 free composition errors

2) **Speaking errors**
   2.1 phonological errors
   2.2 grammatical errors

The errors committed in the written form of the language are called as writing errors and those committed in the speech are speaking errors. In the dictation errors, the errors committed in the graphological level are analysed and in free composition errors the errors committed in the grammatical level are analysed. Some of the examples of the above types of errors are as follows:

i) **Writing errors**
   1. * tankam 'gold' [ tankam (graphological)]
   2. * ciňkanai 'lion(acc.)' [ ciňka-tt-ai (grammatical)]

ii) **Speaking errors**
   1. * cattirucci 'dead-it' [ cettuvitiṭatu (phonological)]
   2. * kocum 'mosquito also' [ kocu-v-um (grammatical)] etc.
5.4.1 **Writing Errors**

Writing errors may be classified into two major sub-types, namely,

1) dictation errors and
2) free composition errors.

Dictation errors are those which appear in words which are given in the dictation form. Free composition errors are the errors which occur in the composition written by the students. In the dictation, the errors are restricted to the graphological level only since the dictation is in the word level. In composition, the errors are distributed in all the levels. However, in this study the non-phonological errors alone are analysed. Normally, graphological, grammatical, semantic and lexical errors appear in free composition.

5.4.1.1 **Dictation Errors**

Dictation errors are further divided into four sub-types. For the present study dictation errors are classified as:

1) Quantitative
2) Positional
3) Orthographic and
4) Process

Errors which are classified on the basis of the number of graphemes in which errors occur are termed as quantitative errors.
Errors which are classified depending upon the position in which the error appears are named as positional errors.

Graphological errors which are related to orthographies such as consonants, vowels and diacritic marks are identified under the cover term orthographic errors.

Process errors are those which occur in the students' data due to the employment of the processes such as addition, deletion and modification of graphemes.

The classification of errors is not a rigid one. One and the same error may be interpreted as a quantitative or positional or orthographic or process error. In this manner we find a sort of overlapping among the errors.

Again, the four types of errors are further classified in the following way:

1) **Quantitative Errors**
   1.1 words with one error
   1.2 words with two errors and
   1.3 words with three errors

2) **Positional Errors**
   2.1 word initial errors
   2.2 word medial errors and
   2.3 word final errors
3) **Orthographic Errors**

3.1 errors in the consonant and
3.2 errors in the vowel

4) **Process Errors**

4.1 errors through addition
4.2 errors through deletion and
4.3 errors through replacement.

In the following section an attempt has been made to classify the various kinds of dictation errors committed by the tribal children in writing. In the illustrations of the errors committed by the students, the serial number of a particular student who has committed the error is given within bracket along with the error.

It is necessary in this section to present some points of clarification regarding the presentation of the classified errors and the norms followed for the representation of the errors.

In the dictation test ten words were given as dictation to Class-4 students and another set of ten words were given to Class-5 students. The answers were received from the students in Tamil orthographic form since the purpose of the dictation test is to evaluate the students' ability to represent the Tamil scripts in a sequential form.

But, for explanation of the orthographic errors, the orthographic forms are converted into phonemic forms and only on the basis of the
phonemic forms the classification of the error is made. Even though taking into account the orthography as the basic factor for the identification of errors is the right procedure, the phonemic characters are taken as the basis for error classification and interpretation of errors for certain reasons.

1) primarily the present dissertation is written in the medium of English

2) representing the graphemic and diacritical elements of graphemes in typo-graphic form is difficult.

However, it is felt that a discussion of the correlation of the graphological form and phonological form of Tamil scripts is necessary and therefore some points pertaining on these aspects are presented below.

In Tamil scripts we find two major characters (1) independent grapheme (2) diacritic elements: with the help of diacritic elements the independent graphemes are modified so as to create different, complex graphemes. The diacritic forms may have various shapes— they may be in dot forms, curve forms, stroke forms, etc. Some diacritical marks even though (theoretically) they depend upon the simple independent graphemes, they are written independently. For example, the marker for the sound [ai] ( w ) and length marker ( ₇ ) are of this kind. The diacritical forms may occur in all the four positions surrounding an independent grapheme i.e. they may occupy top or bottom, and left or right position. Tamil orthographic forms also are syllabic in nature and therefore some problems are encountered while converting Tamil
graphic forms into phonemic forms. These problems will have a strong bearing over the classification of errors on the basis of position, number, quality, etc.

For example, an independent grapheme may have to be given a phonetic shape with two sounds [ /a:/ (♂)]. A graphic form with an independent grapheme and a dependent diacritic mark may have to be represented with the help of the single phonetic character (1 = φ). Sometimes a diacritic form itself has to be given in phonetic orthography as a diacritic mark or as a sound or a sequence of sounds _ _ = ai, _ _ = i:, _ = i:, etc.

When we attempt a classification of written errors in terms of their position based on the Tamil orthographic system the positional error will be decided on the basis of initial or medial or final syllabic graphemes on which the error occurs. Also the position of the diacritic mark or grapheme in Tamil orthographic writing will have to be taken into consideration for the classification of errors in terms of position, quality and quantity. But while representing such graphological errors in terms of phonetic or phonemic form a shift occurs in the classification of errors. For example an erroneous form ' கட்' for the correct form ' க்காக்' will be graphological when interpreted as an initial error. But while representing the same erroneous forms in phonemic/phonetic orthographic shape these errors will be classified as word medial errors.
Similarly, the erroneous form /tantacco:ru/ written for /tantacco:ru/ is treated orthographically as a word final error. But in phonemic terms it is treated as a medial error. The error form /tø:ŋka:y/ written as equivalent to the correct form /te:ŋka:y/ is orthographically interpreted as due to the addition of a diacritic grapheme representing length (n) in the word initial position, because it occurs in the first syllable of the orthographic form. But when this form is interpreted phonemically the error is interpreted as a phonemic error occurring in the word medial position. Many other examples can also be cited to illustrate the problems involved in converting the orthographic form of the word into phonetic/phonemic form. It is evident from the above example that a classification of the errors taking into account the graphic form and phonemic form will entirely change the picture of classification.

If all the dictation errors are classified on the basis of orthographic form, there will be an equal distribution of initial, medial, final errors, etc. But if they are converted into phonological form the errors in the medial position appear to be more in number when compared to the initial and final errors.

So in the present study a uniform methodology is followed by way of giving the phonemic form to the erroneous word and the error classification has been made only on the basis of the phonemic forms.
Some illustrative examples are presented in order to show the possibility of classifying errors on the basis of the Tamil orthography also. The following are some of the examples:

1) இய்யா + இய்யா

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>இ -&gt; ஓ (த + ள)</td>
<td></td>
</tr>
<tr>
<td>Medial</td>
<td>ற -&gt; ற (ப + ப)</td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>துரு + துரு</td>
<td></td>
</tr>
</tbody>
</table>

2) நீதி + நீதிஞ்ச

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>ஒ + &lt; ன &gt; (இ + ன)</td>
<td></td>
</tr>
<tr>
<td>Medial</td>
<td>ன + &lt; ன &gt; &lt; ன &gt;</td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>ன + ன + ன</td>
<td></td>
</tr>
</tbody>
</table>

3) முடுக்க + முடுக்க

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>அ + [ ஆ ]</td>
<td></td>
</tr>
<tr>
<td>Initial</td>
<td>ப + [ ப ]</td>
<td></td>
</tr>
<tr>
<td>Final</td>
<td>ப + [ ப ]</td>
<td></td>
</tr>
</tbody>
</table>

In the rest of this chapter, different kinds of errors committed by the students have been classified purely on the basis of the phonemic forms of the words in which the errors occur. Four major classificatory parameters are adopted for this purpose. They are:

1) position of the erroneous phonemes
2) number of phonemes
3) kinds of phonemes

4) the kind of tribal student population in which the errors occur

5.4.1.1.1 Quantitative Errors

5.4.1.1.1 Words with one error

5.4.1.1.1.1 Kurumba in Class 4

\[
\begin{align*}
\text{ilaiñarkal} & \rightarrow \text{ilaiñarkal} \\
(1 \rightarrow 1) & \quad (6,8) \\
\text{tevittatata} & \rightarrow \text{tevittatata} \\
(a \rightarrow a) & \quad (8) \\
\text{teñka:y} & \rightarrow \text{teñkay} \\
(a \rightarrow a) & \quad (4) \\
& \quad (e \rightarrow e) \quad (6,8) \\
\text{to:rrpai} & \rightarrow \text{to:rrppai} \\
(rp \rightarrow rpp) & \quad (9) \\
\text{cirpakkalai} & \rightarrow \text{cirkpakkalai} \\
(kk \rightarrow k) & \quad (8) \\
& \quad (1 \rightarrow 1) \quad (9)
\end{align*}
\]
cemma:\-ntu → cemma:\-ntu

(a: → a) (4,8)

+ cemma:\-ntu

(e → o) (10)

kalaiyalaku → kalaiyalaku

(1 → 1) (4,7,10)

murukku → murukku

(r + r) (4,6,7)

nilavuveliccam → nilavuvo:liccam

(e → o:) (10)

5.4.1.1.1.2 Kurumba in Class-5

a:ppil → a:ppil

(1 → 1) (1,6)

+ a:ppil

(1 → 1) (4)

+ appil

(a: → a) (8)
uru¹aikkilaⁿku  \rightarrow urulaikilaⁿku  \\
(kk \rightarrow k) \quad (1) \\
\rightarrow urulaikkilaⁿku  \\
(l \rightarrow l) \quad (10) \\
pa:skara:  \rightarrow pa:skara:  \\
(s \rightarrow s) \quad (1) \\

ceⁿam  \rightarrow ceⁿam  \\
(\eta \rightarrow n) \quad (1) \\
\rightarrow ceⁿam  \\
(\eta \rightarrow n) \quad (4) \\
\rightarrow ceⁿam  \\
(e: \rightarrow e) \quad (6) \\
me:rpuram  \rightarrow me:rpuram  \\
(r \rightarrow r) \quad (6) \\
mullan⁰ki  \rightarrow mullaⁿki  \\
(a \rightarrow a:) \quad (1) \\
\rightarrow mullaⁿki  \\
(l \rightarrow l) \quad (4, 5) \\
\rightarrow mu:llaⁿki  \\
(u \rightarrow u:) \quad (6)
nakai → na:kai
(a → a:) (7,8)

nutpam → guppam
(t → p) (1)

→ nunpam
(t → n) (4)

→ nu:tpam
(u → u:) (10)

5.4.1.1.1.3 Irula in Class-4

tevit'ta:ta → tevit'tata
(a: → a) (4)

→ tevit'ta:ka
(t → k) (5)

tevit'ta:ka 

→ to:ñka:y
(e: → o:) (1)

→ te:ñkai
(a:y → ai) (4)

to:ppalaku → teppalaku
(o:→ e) (4)

→ to:ppalaku
(l → l) (5)

→ toppalaku
(o: → o) (6,7)
<table>
<thead>
<tr>
<th>Rule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>to:rpai</td>
<td>$\rightarrow$ to:rpai</td>
</tr>
<tr>
<td></td>
<td>$(o: \rightarrow o)$</td>
</tr>
<tr>
<td></td>
<td>$(o: \rightarrow e:)$</td>
</tr>
<tr>
<td>cirpakkalai</td>
<td>$\rightarrow$ cirpakkalai</td>
</tr>
<tr>
<td></td>
<td>$(kk \rightarrow k)$</td>
</tr>
<tr>
<td></td>
<td>$(rp \rightarrow rpp)$</td>
</tr>
<tr>
<td>cemma:ntu</td>
<td>$\rightarrow$ cemma:ntu</td>
</tr>
<tr>
<td></td>
<td>$(a: \rightarrow a)$</td>
</tr>
<tr>
<td></td>
<td>$(n \rightarrow \emptyset)$</td>
</tr>
<tr>
<td></td>
<td>$(e \rightarrow e:)$</td>
</tr>
<tr>
<td>kalaiyalaku</td>
<td>$\rightarrow$ kalaiyalaku</td>
</tr>
<tr>
<td></td>
<td>$(a \rightarrow a:)$</td>
</tr>
<tr>
<td></td>
<td>$(l \rightarrow 1)$</td>
</tr>
<tr>
<td></td>
<td>$(1 \rightarrow 1)$</td>
</tr>
<tr>
<td></td>
<td>$(a \rightarrow a:)$</td>
</tr>
</tbody>
</table>
5.4.1.1.1.4 Irula in Class-5

murukku → murukku
(r → r) (1, 3, 4)

muruku
(kk → k) (7)

murakkku
(u → a) (8)

nilavuveliccam → nilavuveluccam
(i → u) (5)

ni:lavuveliccam
(i → i:) (9)

1. a:ppil → appil
   (a: → a) (1, 3)

2. urulaikkilaŋku → urulaikkilaŋku
   (kk → k) (2)

3. tantacco:ru → tantacco:ru
   (cc → c) (5)

4. ce:ŋam → ce:nam
   (n → n) (2, 5, 10)

5. me:ṛpuram → me:ṛppuram
   (ṛp → ṛpp) (1)

6. me:ṛpuram
   (r → r) (2)

7. mo:ṛpuram
   (e: → o:) (3)
nakai $\rightarrow$ na:kai

(a $\rightarrow$ a:) (3)

$\rightarrow$ nakay

(ai $\rightarrow$ ay) (9)

nutpam $\rightarrow$ nutpam

(n $\rightarrow$ n) (6)

5.4.1.1.1.5 Paniya in Class-4

ilainarkal $\rightarrow$ ilaiñarkal

(1 $\rightarrow$ l) (1)

te:sittata $\rightarrow$ tevittata

(a: $\rightarrow$ a) (5)

to:nka:y $\rightarrow$ to:ñka:y

(e: $\rightarrow$ o:) (1)

to:ppai $\rightarrow$ to:ppai

(r $\rightarrow$ p) (4)

cirpakkalai $\rightarrow$ cippakkalai

(r $\rightarrow$ p) (5)

cemma:ntu $\rightarrow$ cemma:n:tu

(a: $\rightarrow$ a) (4,5)

kalaiyalaku $\rightarrow$ kalaiyalaku

(1 $\rightarrow$ l) (5)

murukku $\rightarrow$ murukku

(r $\rightarrow$ r) (1,3,4,5,6)
nilavuveliccam → nilapuveliccam
(v → p) (3)

5.4.1.1.1.6 Paniya in Class-5

a:ppil → a:ppil
(1 → 1) (3)

urulaikkila♥ku → urulaikkila♥ku
(1 → 1) (9)

vtanacco:ru → tanacco:ru
(a → ai) (4)

ce:nam → ce:nam
(n → n) (3)

me:lpuram → me:lpuram
(r → 1) (3)
\( \text{nakai} \rightarrow \text{na:kai} \)

\[ (a \rightarrow a:) \]  

\[ (a \rightarrow a:) \]  

\[ (6) \]

\( \text{nutpam} \rightarrow \text{nutpa:m} \)

\[ (a \rightarrow a:) \]  

\[ (4) \]

5.4.1.1.1.2 Words with two errors

5.4.1.1.1.2.1 Kurumba in Class-4

\( \text{ilainarkal} \rightarrow \text{ilainnarkal} \)

\[ (1 \rightarrow 1) \& \]

\[ (\sim n \rightarrow \sim n) \]  

\[ (10) \]

\( \text{tevitta:ta} \rightarrow \text{te:vittata} \)

\[ (e \rightarrow e:) \& \]

\[ (a: \rightarrow a) \]  

\[ (4) \]

\( \text{te:ñka:y} \rightarrow \text{to:ñkay} \)

\[ (e: \rightarrow o:) \& \]

\[ (a: \rightarrow a) \]  

\[ (10) \]

\( \text{to:ppalaku} \rightarrow \text{te:ppalaku} \)

\[ (0: \rightarrow e:) \& \]

\[ (1 \rightarrow l) \]  

\[ (4,8) \]

\( \text{cirppakkalai} \rightarrow \text{cappakkalai} \)

\[ (i \rightarrow a) \& \]

\[ (\varepsilon \rightarrow p) \]  

\[ (7) \]

\( \rightarrow \text{cirppakalai} \)

\[ (\varepsilon p \rightarrow \varepsilon pp) \& \]

\[ (kk \rightarrow k) \]  

\[ (10) \]
5.4.1.1.1.2.2 Kurumba in Class-5

kalaiyalaku $\rightarrow$ kalaiyalaku

$(1 \rightarrow 1) \&$

$(1 \rightarrow 1)$

$\rightarrow$ kalaiyalaku

$(a \rightarrow a:) \&$

$(1 \rightarrow 1)$

murukku $\rightarrow$ murukku

$(r \rightarrow r) \&$

$(u \rightarrow u:)$

nilavu veliccam $\rightarrow$ nilavu veliccam

$(a \rightarrow ai) \&$

$(a \rightarrow e)$

$\rightarrow$ nilavuveliccam

$(e \rightarrow e:) \&$

$(i \rightarrow u)$

5.4.1.1.2.2 Kurumba in Class-5

appil $\rightarrow$ appil

$(a: \rightarrow a) \&$

$(1 \rightarrow 1)$

urulaikkilaŋku $\rightarrow$ urulaikkilaŋku

$(1 \rightarrow 1) \&$

$(kk \rightarrow k)$

pa:skara: $\rightarrow$ va:skara:

$(p \rightarrow v) \&$

$(s \rightarrow \emptyset)$
\text{tantacco:ru} \rightarrow \text{tantaico:ru} \\
\quad (a \rightarrow ai) \land (cc \rightarrow c) \quad (4) \\

\text{cenpakatavi} \rightarrow \text{cenpakatavi} \\
\quad (n \rightarrow n) \land (a : \rightarrow a) \quad (4,5) \\

\rightarrow \text{conpakatavi} \\
\quad (e \rightarrow o) \land (n \rightarrow n) \quad (6) \\

\text{ce:nam} \rightarrow \text{cenam} \\
\quad (e \rightarrow e :) \land (n \rightarrow n) \quad (2) \\

\rightarrow \text{conam} \\
\quad (e : \rightarrow o) \land (n \rightarrow n) \quad (7) \\

\text{nutpam} \rightarrow \text{nutpam} \\
\quad (n \rightarrow n) \land (a \rightarrow a :) \quad (7) \\

\rightarrow \text{nuppam} \\
\quad (n \rightarrow n) \land (t \rightarrow p) \quad (8)
5.4.1.1.2.3 Irula in Class-4

\[
\begin{align*}
ilainarkal & \rightarrow \text{ilainarkal} \\
& \quad (l + l) \& \\
& \quad (n \rightarrow n) \quad (5) \\
\end{align*}
\]

\[
\begin{align*}
ilainarkal & \rightarrow \text{ilainarkal} \\
& \quad (n \rightarrow n) \& \\
& \quad (r \rightarrow r) \quad (9) \\
\end{align*}
\]

\[
\begin{align*}
tevittata:ta & \rightarrow \text{tevittata:} \\
& \quad (a \rightarrow a) \& \\
& \quad (a \rightarrow a:) \quad (1) \\
\end{align*}
\]

\[
\begin{align*}
tovitta:ta: & \rightarrow \text{tovittata:} \\
& \quad (e \rightarrow o) \& \\
& \quad (a \rightarrow a:) \quad (2) \\
\end{align*}
\]

\[
\begin{align*}
tovittata: & \rightarrow \text{tovittata} \\
& \quad (e \rightarrow o) \& \\
& \quad (a: \rightarrow a) \quad (9) \\
\end{align*}
\]

\[
\begin{align*}
tevnka:y & \rightarrow \text{ta:kkay} \\
& \quad (n \rightarrow k) \& \\
& \quad (a: \rightarrow a) \quad (3) \\
\end{align*}
\]

\[
\begin{align*}
tevnkay & \rightarrow \text{tevnkay} \\
& \quad (e: \rightarrow e) \& \\
& \quad (a: \rightarrow a) \quad (9) \\
\end{align*}
\]
to:ppalaku $\rightarrow$ toppalaku

\[(o \rightarrow o) \&
(a \rightarrow a:)\]  

(2)

teppalaku

\[(o \rightarrow e) \&
(1 \rightarrow \hat{1})\]  

(9)

to:rpai $\rightarrow$ terpay

\[(o \rightarrow e) \&
(ai \rightarrow ay)\]  

(3)

$\rightarrow$ terpai

\[(o \rightarrow e) \&
(r \rightarrow r)\]  

(4)

cirpakkalai $\rightarrow$ cirppakalai

\[(\hat{r}p \rightarrow \hat{r}pp) \&
(kk \rightarrow k)\]  

(2)

kalaiyalaku $\rightarrow$ kalaiya:laku

\[(l \rightarrow \hat{1}) \&
(a \rightarrow a:)\]  

(2)

murukku $\rightarrow$ mu:rukku

\[(u \rightarrow u:) \&
(\hat{r} \rightarrow r)\]  

(9)

nilavuveliccam $\rightarrow$ nilavuvolicca:m

\[(e \rightarrow o) \&
(a \rightarrow a:)\]  

(2)
5.4.1.1.2.4 Irula in Class-5

- **a:ppil** → **appil**
  
  \[(a: \rightarrow a) \& (l \rightarrow l)\]
  
  \[(6,8,9)\]

- **urulaikkilaŋku** → **urulaikilaŋku**
  
  \[(kk \rightarrow k) \& (l \rightarrow l)\]
  
  \[(1)\]

- **pa:skara:** → **pa:skara**
  
  \[(a + a:) \& (a: \rightarrow a)\]
  
  \[(8)\]

- **cenpaka:tavi** → **conpaka:tavi**
  
  \[(e + o) \& (n \rightarrow n)\]
  
  \[(3)\]

- **cenam** → **conam**
  
  \[(e: \rightarrow 0) \& (n \rightarrow n)\]
  
  \[(3,9)\]
me:rpuram → metpuram
    (e: → e) &
    (r → t)  \( 6 \)
→ me:rpuram:m
    (r → r) &
    (a → a:)  \( 7 \)
→ me:rpuram
    (r → r) &
    (r → r)  \( 10 \)

mullaŋki → mulleŋki
    (l1 → l1) &
    (a → e)  \( 9 \)

nuptam → nuppam
    (n → n) &
    (t → p)  \( 8 \)

5.4.1.1.2.5 Paniya in Class-4

ilaińarkal → ilaińcarkal
    (l → l) &
    (Ø → c)  \( 6 \)

tenka:y → tońkay
    (e: → o:) &
    (a: → a)  \( 4 \)
to:ppalaku → toppalaku
(o: → o) &
(1 → 1) (1,5)

cemma:ntu → commantu
(e → o) &
(a: → a) (1)

-nilavu veliccam → nalavu veliccam
(i → a) &
(1 → 1) (6)

5.4.1.1.2.6 Paniya in Class-5

tantacco:ru → tantaicco:ru
(ŋ → n) &
(a → ai) (2)

ce:nam → cenam
(e: → e) &
(ŋ → n) (3)

me:ŋpuram → me:ŋppuram
(ŋp → ŋpp) &
(r → r) (6)

mullańki → mulle:ńki
(1 → 1) &
(a → e:) (6)
\[
\text{n̄ūt̄p̄ām} \quad \rightarrow \quad \text{n̄āmp̄ām}
\]
\[
(u \rightarrow a) \\
(t \rightarrow m)
\]

(3)

5.4.1.1.3 Words with three errors

5.4.1.1.3.1 Kurumba in Class-4

\[
cir̄p̄āk̄k̄āl̄āi \quad \rightarrow \quad cir̄ūp̄p̄āk̄k̄āl̄āi
\]
\[
(r \rightarrow r) \\
(\emptyset \rightarrow u) \quad \& \\
(p \rightarrow pp)
\]

(4)

\[
cir̄p̄p̄āk̄āl̄āi \quad \rightarrow \quad cir̄p̄p̄āk̄āl̄āi
\]
\[
(p \rightarrow pp) \\
(kk \rightarrow k) \quad \& \\
(l \rightarrow l)
\]

(6)

\[
tōr̄p̄āi \quad \rightarrow \quad tōr̄p̄p̄āīy
\]
\[
(r \rightarrow r) \\
(p \rightarrow pp) \quad \& \\
(\emptyset \rightarrow y)
\]

(10)

5.4.1.1.3.2 Kurumba in Class-5

\[
āp̄p̄īl̄ \quad \rightarrow \quad appul
\]
\[
(a: \rightarrow a) \\
(i \rightarrow u) \quad \& \\
(l \rightarrow l)
\]

(2)
146

\[ \text{tantaico:ru} \rightarrow \text{tantaico:ru} \]
\[ (n \rightarrow n) \]
\[ (a \rightarrow ai) \land (cc \rightarrow c) \] (6)

\[ \text{cenpakata:vi} \rightarrow \text{cenpakata:vi} \]
\[ (n \rightarrow n) \]
\[ (a \rightarrow a) \land (a \rightarrow a:) \] (1)

\[ \text{me:rpuram} \rightarrow \text{nerpuram} \]
\[ (m \rightarrow n) \]
\[ (e \rightarrow e) \land (r \rightarrow r) \] (2)

\[ \rightarrow \text{mo:lpuram} \]
\[ (e \rightarrow o:) \]
\[ (r \rightarrow 1) \land (r \rightarrow r) \] (4)

\[ \rightarrow \text{mailpuram} \]
\[ (e \rightarrow ai) \]
\[ (r \rightarrow l) \land (r \rightarrow r) \] (5)

5.4.1.1.1.3.3 **Irula in Class 4**

\[ \text{ilainarkal} \rightarrow \text{ilacharkal} \]
\[ (l \rightarrow l) \]
\[ (ai \rightarrow a) \land (\emptyset \rightarrow c) \] (3)
\[
\begin{align*}
\rightarrow \text{ ilanarkal} & \quad (1 \rightarrow 1) \\
& \quad (ai \rightarrow a) \land (n \rightarrow n) \\
\rightarrow \text{ ilaiyana:rkal} & \quad (\emptyset \rightarrow ya) \\
& \quad (\tilde{n} \rightarrow n) \land (a \rightarrow a) \\
& \quad (1 + 1) \land (n \rightarrow n) \land (a \rightarrow a) \\
& \quad (\tilde{n} \rightarrow \tilde{n}n) \\
\rightarrow \text{ ilainarkal} & \quad (1 \rightarrow 1) \\
& \quad (ai \rightarrow a) \land (\tilde{n} \rightarrow \tilde{n}n) \land (r \rightarrow r) \\
\rightarrow \text{ ilainarkal} & \quad (1 \rightarrow 1) \\
& \quad (\tilde{n} \rightarrow n) \land (r \rightarrow r) \\
\end{align*}
\]
<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>tevittta:ta</td>
<td>tevittata</td>
</tr>
<tr>
<td>(e → e:)</td>
<td>(e → e:)</td>
</tr>
<tr>
<td>(tt → t) &amp;</td>
<td>(tt → t) &amp;</td>
</tr>
<tr>
<td>(a: → a)</td>
<td>(a: → a)</td>
</tr>
</tbody>
</table>

(4)

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>te:ńka:ya</td>
<td>teńkayai</td>
</tr>
<tr>
<td>(e: → e)</td>
<td>(e: → e)</td>
</tr>
<tr>
<td>(a: → a) &amp;</td>
<td>(a: → a) &amp;</td>
</tr>
<tr>
<td>(∅ → ai)</td>
<td>(∅ → ai)</td>
</tr>
</tbody>
</table>

(7)

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>to:rpai</td>
<td>torpa:y</td>
</tr>
<tr>
<td>(o: → o)</td>
<td>(o: → o)</td>
</tr>
<tr>
<td>(r → r) &amp;</td>
<td>(r → r) &amp;</td>
</tr>
<tr>
<td>(ai → a:y)</td>
<td>(ai → a:y)</td>
</tr>
</tbody>
</table>

(2)

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>to:rpai</td>
<td>torpa:y</td>
</tr>
<tr>
<td>(o: → o)</td>
<td>(o: → o)</td>
</tr>
<tr>
<td>(r → r) &amp;</td>
<td>(r → r) &amp;</td>
</tr>
<tr>
<td>(ai → a:y)</td>
<td>(ai → a:y)</td>
</tr>
</tbody>
</table>

(5)

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>cirpakkalai</td>
<td>cipparkalai</td>
</tr>
<tr>
<td>(r → p)</td>
<td>(r → p)</td>
</tr>
<tr>
<td>(k → r) &amp;</td>
<td>(k → r) &amp;</td>
</tr>
<tr>
<td>(l → l)</td>
<td>(l → l)</td>
</tr>
</tbody>
</table>

(4)

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>cemma:ntu</td>
<td>cemmatta</td>
</tr>
<tr>
<td>(a: → a)</td>
<td>(a: → a)</td>
</tr>
<tr>
<td>(n → t) &amp;</td>
<td>(n → t) &amp;</td>
</tr>
<tr>
<td>(u → a)</td>
<td>(u → a)</td>
</tr>
</tbody>
</table>

(3)
5.4.1.1.3.4 Irula in Class 5

urulaikkilänku → urulaikkilänku
→ (r → r)
→ (l → l) &
→ (a → a:)

(7)

→ urulaikilänku
→ (l → l)
→ (l → k) &
→ (l → l)

(8)

→ urulaikilänki
→ (kk → k)
→ (l → l) &
→ (u → l)

(10)

pa:skara: → paskkara
→ (a: → a)
→ (k → kk) &
→ (a: → a)

(1)

→ paskara
→ (a: → a)
→ (r → r) &
→ (a: → a)

(6)

tantacco:ru → tantaic:rru
→ (a → ai)
→ (Ø → r) &
→ (r → r)

(1)
cenpakaːtavi → cenpaːkatavi
   + (n → n)
   + (a → aː) &
   + (aː → a)  (9)

nuṭpam → nuːlppam
   + (u → uː)
   + (t → l) &
   + (p → pp)  (1)

5.4.1.1.1.3.5 Paniya in Class-4

tevittāːta → teːvittaka
   + (e → eː)
   + (aː → a) &
   + (t → k)  (1)

toːrpaːi → torpay
   + (oː → o)
   + (r → r) &
   + (ai → ay)  (1)

   + torpayi
   + (oː → o)
   + (r → r) &
   + (∅ → i)  (5)
cirppakalai  → cirppakalai
  → (r → r)
  → (p → pp) &
  → (kk → k) (1)

kalaiyalaku  → kalaiyalaiku
  → (a → a:)
  → (l → l) &
  → (a → ai) (6)

5.4.1.1.1.3.6 Paniya in Class-5

urulaikkilaṅku  → urule:kiḷaṅku
  → (l → l)
  → (ai → e:) &
  → (kk → k) (3)

cenpakatavi  → cenpakatavi
  → (n → n)
  → (a: → a) &
  → (t → t) (3)
5.4.1.1.2 Positional Errors

5.4.1.1.2.1 Word Initial Errors

5.4.1.1.2.1.2 Kurumba in Class - 5

\[a:\text{ppil} \rightarrow \text{appul}\]
\[(a: \rightarrow a) \quad (2)\]

\[\rightarrow \text{appil}\]
\[(a: \rightarrow a) \quad (5)\]

\[\rightarrow \text{appil}\]
\[(a: \rightarrow a) \quad (8)\]

\[urulaikkil\text{an}ku \rightarrow u:\text{rulekilari}\]
\[(u \rightarrow u:) \quad (8)\]

\[pa:\text{skara} \rightarrow \text{vaskaran}\]
\[(p \rightarrow v) \quad (4)\]

\[\rightarrow \text{vaskara}\]
\[(p \rightarrow v) \quad (5)\]

\[t\text{antacco:ru} \rightarrow t\text{antaicor}u\]
\[(t \rightarrow t) \quad (7)\]
\[ \text{me:rpuram} \rightarrow \text{nerpuram} \quad (m \rightarrow n) \quad (2) \]

\[ \rightarrow \text{no:rpuram} \quad (m \rightarrow n) \quad (7) \]

\[ \text{nuptam} \rightarrow \text{nuptam} \quad (n \rightarrow n) \quad (7) \]

\[ \rightarrow \text{nuppam} \quad (n \rightarrow n) \quad (8) \]

**5.4.1.1.2.1.4 Irula in Class - 5**

\[ \text{appil} \rightarrow \text{appil} \quad (a : a) \quad (1,3) \]

\[ \rightarrow \text{appil} \quad (a : a) \quad (6,8,9) \]

\[ \text{nuptam} \rightarrow \text{nuptam} \quad (n \rightarrow n) \quad (6) \]

\[ \rightarrow \text{nuppam} \quad (n \rightarrow n) \quad (8) \]

\[ \rightarrow \text{nurpam} \quad (n \rightarrow n) \quad (9) \]

\[ \rightarrow \text{nuppa:m} \quad (n \rightarrow n) \quad (10) \]

**5.4.1.1.2.16 Paniya in Class - 5**

\[ \text{pa:skara:} \rightarrow \text{va:skara:} \quad (p \rightarrow v) \quad (6) \]
The following list is presented in order to reveal the kind of errors occurring in the initial position and the number of occurrences of the initial errors obtained from the tribal children's data obtained through dictation test. This kind of list will be useful to identify the amount of errors, the gravity of the errors and the problematic graphological items faced while learning the Tamil orthography. The number given within the brackets shows the number of occurrences of the error that occurs in the data.

a) **Initial Vocalic Errors**
   - \( a \rightarrow a \) (5)
   - \( u \rightarrow u: \) (1)

b) **Initial Consonantal Errors**
   - \( p \rightarrow v \) (3)
   - \( t \rightarrow t \) (1)
   - \( m \rightarrow n \) (1), \( n \) (1)
   - \( n \rightarrow n \) (5)

From the above list it appears that sounds like /a/, p, n/ are problematic items in the word initial position because they have the number of occurrences 5, 3, 5 respectively.

5.4.1.1.2.2 **Word Medial Errors**

5.4.1.1.2.2.1 **Kurumba in Class-4**

\( \text{ilai}^{\text{narkal}} \rightarrow \text{ilai}^{\text{narkal}} \) (1 → 1) (6, 8)
<table>
<thead>
<tr>
<th>Rule</th>
<th>Replacement</th>
<th>Tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>( l \rightarrow l )</td>
<td>( \text{t evi11 a:t a} )</td>
<td>( \tilde{n} \rightarrow \tilde{n} ) (10)</td>
</tr>
<tr>
<td>( n \rightarrow n )</td>
<td>( \text{to:ppalaku} )</td>
<td>( \text{te:nkay} ) (10)</td>
</tr>
<tr>
<td>( e \rightarrow e ) &amp;</td>
<td>( \text{te:ppalaku} )</td>
<td>( \text{te:ppalaku} )</td>
</tr>
<tr>
<td>( a: \rightarrow a )</td>
<td></td>
<td>( \text{te:ppalaku} )</td>
</tr>
</tbody>
</table>
→ toppalaku
  \[(\text{o} : \rightarrow \text{o}) \& (\text{l} \rightarrow \text{l})\]  
  (10)

→ torpa:y
  \[(\text{o} : \rightarrow \text{o})\]
  \[(\text{r} \rightarrow \text{r}) \& (\text{a} \rightarrow \text{a:})\]  
  (6)

→ to:rpai
  \[(\text{rp} \rightarrow \text{rpp})\]  
  (9)

→ to:rpaiy
  \[(\text{r} \rightarrow \text{r}) \& (\text{rp} \rightarrow \text{rpp})\]  
  (10)

cirpakkalai → ciruppakalai
  \[(\text{r} \rightarrow \text{r}) \& (\text{rp} \rightarrow \text{rup})\]  
  (4)

cirppakalai → cirppakalai
  \[(\text{rp} \rightarrow \text{rpp})\]
  \[(\text{kk} \rightarrow \text{k}) \& (\text{l} \rightarrow \text{l})\]  
  (6)

cappakkalai → cappakkalai
  \[(\text{p} \rightarrow \text{pp})\]  
  (7)
\[ \rightarrow \text{cirpakalai} \]
\[ (r \rightarrow r) \& \\
(kk \rightarrow k) \quad (8) \]

\[ \rightarrow \text{cirppakalai} \]
\[ (p \rightarrow pp) \& \\
(kk \rightarrow k) \quad (10) \]

\[ \rightarrow (\text{cirpakkalai}) \]
\[ (1 \rightarrow 1) \quad (9) \]

\[ \text{cemman}t u \rightarrow \text{cemman}t u \]
\[ (a \rightarrow a) \quad (4,8) \]

\[ \rightarrow \text{cemman}t u \]
\[ (e \rightarrow o) \quad (10) \]

\[ \text{kaiyala}k u \rightarrow \text{kaiyala}k u \]
\[ (1 \rightarrow 1) \& \\
(1 \rightarrow 1) \quad (6) \]

\[ \rightarrow (\text{kaiyala}k u) \]
\[ (a \rightarrow a:) \& \\
(1 \rightarrow 1) \quad (8) \]

\[ \text{murukku} \rightarrow \text{murukku} \]
\[ (r \rightarrow r) \quad (4,6,7) \]

\[ \rightarrow \text{murukku} \]
\[ (r \rightarrow r) \quad (8) \]
\[ (u \rightarrow u:) \quad (8) \]
\[ \text{nilavu veliccam} \rightarrow \text{nilaivu veliccem} \]
\[ (a \rightarrow ai) \& (a \rightarrow e) \quad (4) \]
\[ \rightarrow \text{nilavu ve:liccam} \]
\[ (e \rightarrow e:) \]
\[ (l \rightarrow l) \& (i \rightarrow u) \quad (7) \]
\[ \rightarrow \text{nilavu vo:liccam} \]
\[ (e \rightarrow o:) \quad (10) \]

5.4.1.1.2.2.2 Kurumba in Class-5

\[ \text{appil} \rightarrow \text{appul} \]
\[ (i \rightarrow u) \quad (2) \]
\[ \text{urulaikkila} \rightarrow \text{urulaikila} \]
\[ (kk \rightarrow k) \quad (1) \]

\[ \rightarrow \text{urulaikila} \]
\[ (l \rightarrow l) \]
\[ (l \rightarrow l) \& (kk \rightarrow k) \quad (20) \]
\[ \rightarrow \text{urulaikila} \]
\[ (l \rightarrow l) \& (kk \rightarrow k) \quad (4) \]
\[ \rightarrow \text{urulaikilakk} \]
\[
(\hat{l} \rightarrow l) \\
(kk \rightarrow k) \\
(\hat{l} \rightarrow l) \land \\
(\hat{n} \rightarrow k) \quad (5)
\]

\[ \rightarrow \text{u:rulekil}a \hat{n} \]
\[
(l \rightarrow l) \\
(ai \rightarrow a) \\
(kk \rightarrow k) \land \\
(l \rightarrow l) \quad (10)
\]

\[ \text{pa:skara:} \rightarrow \text{vaskaran} \]
\[
(a: \rightarrow a) \quad (1)
\]

\[ \rightarrow \text{vaskara} \]
\[
(a: \rightarrow a) \quad (5)
\]

\[ \text{tantacco:ru} \rightarrow \text{ta:ntaico:ru} \]
\[
(a \rightarrow a:) \\
(a \rightarrow ai) \\
(cc \rightarrow c) \land \\
(o: \rightarrow o) \quad (1)
\]

\[ \rightarrow \text{tattaico:ru} \]
\[
(n \rightarrow t) \\
(a \rightarrow ai) \\
(cc \rightarrow c) \land \\
(r \rightarrow r) \quad (4)
\]
\( \rightarrow \text{tantaico:ru} \)
\[
(n \rightarrow n) \\
(a \rightarrow ai) \land \\
(cc \rightarrow c)
\]  
(6)

\( \rightarrow \text{tantaicoru} \)
\[
(n \rightarrow n) \\
(a \rightarrow ai) \\
(cc \rightarrow c) \land \\
(o \rightarrow o)
\]  
(7)

\( \rightarrow \text{tantaico:ru} \)
\[
(a \rightarrow ai) \land \\
(cc \rightarrow c)
\]  
(10)

\( \rightarrow \text{cenpaka:tavi} \)
\[
(e \rightarrow o) \land \\
(n \rightarrow n)
\]  
(6)

\( \rightarrow \text{conpakka:ta:vi} \)
\[
(e \rightarrow o) \\
(n \rightarrow n) \\
(k \rightarrow kk) \land \\
(a \rightarrow a:)
\]  
(7)

\( \rightarrow \text{cenpakata:vi} \)
\[
(n \rightarrow n) \\
(a: \rightarrow a) \land \\
(a \rightarrow a:)
\]  
(1)
\begin{align*}
\Rightarrow \text{cenpakatavi} \\
(n \rightarrow n) \land \\
(a : \mapsto a) & \quad (4, 5) \\
\Rightarrow \text{ce: nam} \\
(e : \mapsto e) \land \\
(n \rightarrow n) & \quad (6) \\
\Rightarrow \text{ce: nam} \\
(e : \mapsto o) \land \\
(n \rightarrow n) & \quad (7) \\
\Rightarrow \text{me: rpuram} \\
(e : \mapsto e) \land \\
(r \rightarrow r) & \quad (2) \\
\Rightarrow \text{mo: lpuram} \\
(e : \mapsto o:) \\
(r \rightarrow 1) \land \\
(r \rightarrow r) & \quad (4)
\end{align*}
mailpuram
\(e \rightarrow ai\)
\((r \rightarrow l) \& (r \rightarrow r)\)  \(\text{(5)}\)

norpuram
\(e \rightarrow o: \)  \(\text{(7)}\)

metrpuram
\((r \rightarrow r)\)  \(\text{(6)}\)

morpuram
\((e \rightarrow o) \& (r \rightarrow r)\)  \(\text{(8)}\)

mullanki
\(\rightarrow mu:\lnk\)  \(\text{(6)}\)
\((u \rightarrow u: )\)

mulla:\nk\ki
\(\rightarrow mulla:\nk\ki\)  \(\text{(1)}\)
\((a \rightarrow a: )\)

mulla:\nk\ki
\(\rightarrow mulla:\nk\ki\)  \(\text{(4,5)}\)
\((l \rightarrow l)\)

mulla:\nk\ki
\(\rightarrow mulla:\nk\ki\)  \(\text{(7)}\)
\((l \rightarrow l)\)

mulla:\nk\ki
\(\rightarrow mulla:\nk\ki\)  \(\text{(8)}\)
\((l \rightarrow l) \& (a \rightarrow a: )\)
163

nakai \rightarrow na:kai
(a \rightarrow a:)
(7,8)

nutpam \rightarrow nuppam
(t \rightarrow p)
(1)

\rightarrow nunpam
(t \rightarrow n)
(4)

\rightarrow nutpam
(a \rightarrow a:)
(7)

\rightarrow nuppam
(t \rightarrow p)
(8)

\rightarrow nutpam
(u \rightarrow u:)
(10)

5.4.1.1.2.2.3 Irula in Class-4

tevittata: \rightarrow tevittata:
\ldots (a: \rightarrow a)
(1)

tevittata: \rightarrow tovittata:
\ldots (e \rightarrow o)
(2)

tevittata \rightarrow tevittata
\ldots (a: \rightarrow a)
(3)
\[
\begin{align*}
\text{toppa:laku} & \rightarrow \text{toppayat:laku} \\
& \quad \quad (o : \rightarrow o) \ & (\emptyset \rightarrow ya: \ ) \quad (1) \\
\text{toppa:laku} & \rightarrow \text{toppa:laku} \\
& \quad \quad (o : \rightarrow o) \ & (a \rightarrow a : \ ) \quad (2)
\end{align*}
\]
→ teppalaku
    (o: → e)  (4)

→ to:ppalaku
    (l → l)  (5)

→ toppalaku
    (o: → o)  (6,7)

→ teppalaku
    (o: → e) &
    (l → l)  (9)

torpai

→ torpa:y
    (o: → o)
    (r + r) &
    (a + a: )  (2,5)

→ terpay
    (o: → e)  (3)

→ terpai
    (o: → e) &
    (r + r)  (4)

→ torpai
    (o: → o)  (6)
\[ \rightarrow \text{toruppai} \\
(\circ \rightarrow o) \\
(r \rightarrow r) \]
\[ \rightarrow (\emptyset \rightarrow u) \land \\
(p \rightarrow pp) \hspace{1cm} (7) \]
\[ \rightarrow \text{te:rpai} \\
(o \rightarrow e:) \hspace{1cm} (9) \]

\[ \text{cirpakkalai} \rightarrow \text{cirpakkalai} \\
(kk \rightarrow k) \hspace{1cm} (1,3) \]
\[ \rightarrow \text{cirppakalai} \\
(rp \rightarrow rpp) \land \\
(kk \rightarrow k) \hspace{1cm} (2) \]
\[ \rightarrow \text{ciipparkalai} \\
(r \rightarrow p) \land \\
(k \rightarrow r) \hspace{1cm} (4) \]
\[ \rightarrow \text{cirpakalai} \\
(r \rightarrow r) \land \\
(kk \rightarrow k) \hspace{1cm} (5) \]

\[ \text{cemma:ntu} \rightarrow \text{cemma:ntu} \\
(a: \rightarrow a) \hspace{1cm} (1,7,9) \]
\[ \rightarrow \text{cemma:tu} \\
(\mathfrak{n} \rightarrow \emptyset) \hspace{1cm} (5) \]
kalaiyalaku → kalaiyalaku

(a → a:)

(1)

kalaiyalaku → kalaiyalaku

(l → ˩) &

(a → a:)

(2)

kalaiyalaku → kalaiyalaku

(l → 1)

(3, 5, 8)

kalaiyalaku → kalaiyalaku

(l → ˩)

(6, 9)

murukku → murukku

(frared: r → r)

(1, 3, 4)

murukku → murukku

(kk → k)

(7)

murukku → murukku

(u → a)

(8)
<table>
<thead>
<tr>
<th>Sentence</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ mu:rukku</td>
<td>(u → u:) &amp; (r → r)</td>
</tr>
<tr>
<td>nilavu veliccam → nilavu voliccam:m</td>
<td>(e → o) &amp; (a a:)</td>
</tr>
<tr>
<td>→ nilavi vel:cam</td>
<td>(u → i) (e → e:) (i → ø) &amp; (cc → c)</td>
</tr>
<tr>
<td>→ nilavu vel:racam</td>
<td>(e → e:) (l → l) (i → a) &amp; (cc → c)</td>
</tr>
<tr>
<td>→ nilavu veluccam</td>
<td>(i → u)</td>
</tr>
<tr>
<td>→ nilavu veliccam</td>
<td>(i → i:)</td>
</tr>
<tr>
<td>5.4.1.1.2.1.4 Irula in Class-5</td>
<td></td>
</tr>
<tr>
<td>urulaikkilaňku → urulaikilaňku</td>
<td>(kk → k) &amp; (l → l)</td>
</tr>
</tbody>
</table>
\[
\text{→ urulaikilañku} \\
(kk \rightarrow k) \quad (2)
\]

\[
\text{→ urulaikilañku} \\
(kk \rightarrow k) \& \\
(\bot \rightarrow \bot) \quad (6)
\]

\[
\text{→ urulaikilañku} \\
(r \rightarrow r) \quad (7)
\]

\[
\text{→ urulaikilañku} \\
(\bot \rightarrow \bot) \\
(kk \rightarrow k) \& \\
(\bot \rightarrow \bot) \quad (8)
\]

\[
\text{→ urulaikilañki} \\
(kk \rightarrow k) \& \\
(\bot \rightarrow \bot) \quad (10)
\]

\[
\text{paskara:} \\
\text{→ paskkra} \\
(a: \rightarrow a) \& \\
(k \rightarrow kk) \quad (1)
\]

\[
\text{→ paskara} \\
(a: \rightarrow a) \& \\
(r \rightarrow r) \quad (6)
\]
→ paska:ra
(a; → a) &
(a → a;)

→ pa:skaa:ra
(a → a;)

→ tantacco:ru
→ tantaicco:ru

→ tantaco:ru
→ tantaiccoru

→ tantaco:ru
→ tantaiccoru

→ tantaceru
→ tantaiccoru

→ tantaceru
→ tantaiccoru

→ tantaco:ru
→ tantaicco:ru

→ tantaco:ru
→ tantaicco:ru

→ tantaco:ru
→ tantaicco:ru
cenpakatavi $\rightarrow$ cenpakkatakavi
(n $\rightarrow$ n)
(a: $\rightarrow$ a) &
(Ø $\rightarrow$ ka)
(1)

$\rightarrow$ cenpakatavi
(e $\rightarrow$ o) &
(n $\rightarrow$ n)
(3)

$\rightarrow$ cenpakatavi
(n $\rightarrow$ n) &
(a: $\rightarrow$ a)
(5, 10)

$\rightarrow$ cenpakatavi
(n $\rightarrow$ n) &
(a $\rightarrow$ a:)
(7)

cenam $\rightarrow$ cenam
(n $\rightarrow$ n)
(2, 5, 10)

$\rightarrow$ cenam
(e: $\rightarrow$ o)
(3, 9)

$\rightarrow$ cenam
(n $\rightarrow$ n)
(6)

me:rupuram $\rightarrow$ me:rpapuram
(rp $\rightarrow$ rpp)
(1)
+ me:rpuram
(r → r) (2)

→ mo:rpuram
(e: → o:)

→ metpuram
(e: → e)
(r → t) (6)

→ me:rpuram:m
(r → r) &
(a → a:) (7)

- merpuram
(e: e) &
(r → r) (9)

+ me:rpuram
(r → r) (10)

mullańki

+ mullańki
(1 → 1) (5, 6, 8, 1, 0)

- mulleńki
((1 → 1) &
(a → e) (9)
nakai → ńa:kaį
(a → aː) (3)

nutpam → nu:lppam
(u →uː) (1)
(t + 1) & (p → pp) (1)

→ nurpam
(t + r) (7)

→ nuppam
(t + p) (8)

→ nurpam
(t + r) (9)

→ nuppam:m
(t + p) & (a → aː) (10)

5.4.1.1.2.2.5 Paniya in Class-4

ilaiñarkal
(1 ː 1) (1)

tevitta:ta
(t eː eː) (1)
\[
\begin{align*}
\text{\texttt{tevittakai}} & \quad (a: \to a) \quad (3) \\
\text{\texttt{tevittata}} & \quad (a: \to a) \quad (5) \\
\text{\texttt{tenka:y}} & \quad \rightarrow \text{\texttt{to:nka:y}} \\
& \quad (e: \to o:) \quad (1) \\
\text{\texttt{to:nkay}} & \quad \rightarrow \text{\texttt{to:nkay}} \\
& \quad (e: \to o:) \& \\
& \quad (a: \to a) \quad (4) \\
\text{\texttt{toppalaku}} & \quad \rightarrow \text{\texttt{toppalaku}} \\
& \quad (o: \to o) \& \\
& \quad (1 \to 1) \quad (1, 5) \\
\text{\texttt{torpay}} & \quad \rightarrow \text{\texttt{torpay}} \\
& \quad (o: \to o) \\
& \quad (r \to r) \& \\
& \quad (1) \quad (1) \\
\text{\texttt{toppai}} & \quad \rightarrow \text{\texttt{toppai}} \\
& \quad (r \to p) \quad (4) \\
\text{\texttt{torpayi}} & \quad \rightarrow \text{\texttt{torpayi}} \\
& \quad (o: \to o) \\
& \quad (r \to r) \& \\
& \quad (\emptyset \to y) \quad (5)
\end{align*}
\]
cirppakkalai → cirppakkalai

(r → r)
(p + pp) &
(kk → k) (1)

+ cippakkalai
(r → p) (5)

cemmanstu → cemmanstu

(e → o) &
(a + a) (1)

kalaiyalaku → kalaiyalaku

(1 → 1) (5)

+ kalaiyalaiku
(a → a:)
(1 → 1) &
(a → ai) (6)

murukku → murukku

(r → r) (1, 3, 4, 5, 6)

nilavu veliccam → nilapu veliccam

(v → p) (3)

+ nalavu veliccam
(i → a) &
(1 → 1) (5)
5.4.1.1.2.2.6 Paniya in Class 5

\[
\begin{align*}
\text{urulaiikkilaŋku} & \rightarrow \text{urule:kilaŋku} \\
(1 \rightarrow 1) & \\
(ai \rightarrow e:) \& \\
(kk \rightarrow k) & (6)
\end{align*}
\]

\[
\begin{align*}
\text{urulaiikkilaŋku} & \\
(1 \rightarrow 1) & (9)
\end{align*}
\]

\[
\begin{align*}
\text{urulaiikkilaŋku} & \\
(1 \rightarrow 1) & (10)
\end{align*}
\]

\[
\begin{align*}
\text{pa:skara:} & \rightarrow \text{pakkara:} \\
(a \rightarrow a) & \\
(s \rightarrow \emptyset) \& \\
(k \rightarrow kk) & (3)
\end{align*}
\]

\[
\begin{align*}
\text{va:skara:} & \\
(s \rightarrow s) \& \\
(a \rightarrow a:) & (6)
\end{align*}
\]

\[
\begin{align*}
\text{tantacco:ru} & \rightarrow \text{tantaicco:ru} \\
(n \rightarrow n) \& \\
(a \rightarrow ai) & (2)
\end{align*}
\]

\[
\begin{align*}
\text{tantaico:ru} & \\
(a \rightarrow ai) \& \\
(cc \rightarrow c) & (3,10)
\end{align*}
\]
\[\begin{align*}
\text{cenpaka:tavi} & \rightarrow \text{cenpaka:tavi} \\
& (n \rightarrow n) \\
& (a : a) \land \\
& (t \rightarrow t)
\end{align*}\]

\[\begin{align*}
\text{cenpaka:tavi} & \rightarrow \text{cenpaka:tavi} \\
& (n \rightarrow n) \\
& (a : a)
\end{align*}\]

\[\begin{align*}
\text{ce:nam} & \rightarrow \text{ce:nam} \\
& (n \rightarrow n)
\end{align*}\]

\[\begin{align*}
\rightarrow \text{(cenam)} \\
& (e: \rightarrow e)
\end{align*}\]

\[\begin{align*}
\text{me:rpuram} & \rightarrow \text{me:lpuram} \\
& (r \rightarrow l)
\end{align*}\]

\[\begin{align*}
\rightarrow \text{me:rpuram} \\
& (p \rightarrow pp) \land \\
& (r \rightarrow r)
\end{align*}\]

\[\begin{align*}
\text{mullan} & \rightarrow \text{mulle:ñki} \\
& (l \rightarrow l) \land \\
& (a \rightarrow e:)
\end{align*}\]
5.4.1.1.2.3 Word Final Errors

5.4.1.1.2.3.1 Kurumba In Class 4

to:rpa\text{i} \quad \rightarrow \quad to:rppa\text{i}y

(\emptyset \rightarrow y)
5.4.1.1.2.3.2  Kurumba in Class-5

a:ppil
\[ \Rightarrow a:ppil \]
\[ \Rightarrow appul \]
\[ \Rightarrow appil \]
\[ (l \rightarrow l) \quad (1, 2, 5, 6, 7) \]
\[ \Rightarrow a:ppil \]
\[ (l \rightarrow l) \quad (4) \]

urulaikkilankanu \[ \Rightarrow u:rilakilana \]
\[ (u \rightarrow \emptyset) \]

pa:skara: \[ \Rightarrow vaskara \]
\[ (a: \rightarrow a) \quad (5) \]

5.4.1.1.2.3.3  Irula in Class-4

tevittata: \[ \Rightarrow tevittata: \]
\[ (a \rightarrow a:) \quad (1) \]
\[ \Rightarrow tovittata: \]
\[ (a \rightarrow a:) \quad (2) \]

tenkay \[ \Rightarrow te:nkai \]
\[ (a:y \rightarrow ai) \quad (4) \]
\[ \Rightarrow te:nkayai \]
\[ (\emptyset \rightarrow ai) \quad (7) \]

torpai \[ \Rightarrow torpae:y \]
\[ (ai \rightarrow a:y) \quad (2, 5) \]
cemmaːntu → cemmatta
   \((u → a)\) \( (3) \)

5.4.1.1.2.3.4 Irula in Class-5

aːppil → aːppil
   \((i → i)\) \( (5) \)

   + aːppil
   \((i → i)\) \( (6,8,9) \)

urulaikkilaŋku → urulaikilaŋki
   \((u → i)\) \( (10) \)

paːskaraː → paskkara
   \((aː → a)\) \( (1) \)

   + paskara
   \((aː → a)\) \( (6) \)

   + paskaːra
   \((aː → a)\) \( (7,9) \)

   + paːskːra
   \((aː → a)\) \( (8) \)

   + paːskːra
   \((aː → a)\) \( (10) \)

 nakai → nakay
   \((ai → ay)\) \( (9) \)
5.4.1.1.2.3.5 Paniya in Class-4

\[ \text{to:rpai} \rightarrow \text{torpay} \]
\[ (ai \rightarrow ay) \] (1)

5.4.1.1.2.3.6 Paniya in Class-5

\[ \text{a:ppil} \rightarrow \text{a:ppil} \]
\[ (1 \rightarrow 1) \] (3)

\[ \text{pa:skara:} \rightarrow \text{va:skara:} \]
\[ (a: \rightarrow a) \] (6)

The following list provides an idea about the kind of errors and the number of occurrences of errors. A similar list can be prepared for all kinds of errors classified. Such a list will overtly reveal the error gravity and the possibility of grading the problematic area in teaching Tamil graphemic system to the students.

1. Word Medial Vocalic Errors and their number of occurrences

\[ i \rightarrow u (3), \emptyset (1), a(1), i:(1) \]
\[ e \rightarrow e: (7), o:(1), 0(5) \]
\[ e: \rightarrow e (6), 0:(4), 0(3) ai(1) \]
\[ a \rightarrow a:(21), e (2), ai(9) \]
2) Word Medial Consonantal Errors

\[ a : \rightarrow a(20) \]
\[ o : \rightarrow a(2) \quad o(10) \quad e(5) \]
\[ u \rightarrow u:(5) \quad a(1) \quad i(1) \]
\[ ai \rightarrow a(1) \]

\[ p \rightarrow pp(2) \]
\[ t \rightarrow p(4) \quad n(1), l(1) \quad r(1), r(1) \]
\[ tt \rightarrow t(1) \]
\[ cc \rightarrow c(9) \]
\[ k \rightarrow kk(1) \quad r(1) \]
\[ kk \rightarrow k(14) \]
\[ r \rightarrow r 23 \quad l(2) \quad p(1) \quad t(1) \]
\[ rp \rightarrow rpp(4) \quad rup(1) \]
\[ n \rightarrow \emptyset(1) \]
\[ \ddot{n} \rightarrow \dddot{n}(1) \]
\[ \dddot{n} \rightarrow k(2) \quad n(1) \]
From the above list the following appear to be problematic orthographic elements of Tamil for the tribal children in learning.

/a/ (a + a:)
/a:/ (a: + a)
/o:/ (o: + o)
/e/ (e + e:)
[cc/ (cc + c)
/kk/ (kk + k)
/r/ (r + r)
/n/ (n + n)
/l/ (l + l)
/½/ (½ + ½)
5.4.1.1.3 Orthographic Errors
5.4.1.1.3.1 Errors in the consonants
5.4.1.1.3.1.1 Kurumba in Class - 4

\[
\begin{align*}
\text{ilainarkal} & \rightarrow \text{ilainarkal} \\
& \quad (1 \rightarrow 1) \quad (6,8) \\
& \quad \text{ilai\text{ä}narkal} \\
& \quad (1 \rightarrow 1) \quad \& \\
& \quad (\emptyset \rightarrow \text{i}) \quad (10) \\
\text{to:ppalaku} & \rightarrow \text{te:ppalaku} \\
& \quad \text{toppa:alaku} \\
& \quad \text{toppalaku} \\
& \quad (1 \rightarrow 1) \quad (4,6,8,10) \\
\text{to:rpai} & \rightarrow \text{to:rpai} \\
& \quad (p \rightarrow pp) \quad (9) \\
& \quad \text{to:rpaiy} \\
& \quad (r \rightarrow r) \\
& \quad (p \rightarrow pp) \quad \& \\
& \quad (\emptyset \rightarrow y) \quad (10) \\
& \quad \text{torpa:y} \\
& \quad (r \rightarrow r) \quad (6) \\
\text{cirppakkalai} & \rightarrow \text{cirupakkalai} \\
& \quad (r \rightarrow r) \quad (4) \\
& \quad \text{cirppakkalai} \\
& \quad (p \rightarrow pp) \quad \& \\
& \quad (l \rightarrow l) \quad (6)
\end{align*}
\]
\[ \rightarrow \text{cappakkalai} \]
\[ (r \rightarrow p) \quad (7) \]
\[ \rightarrow \text{cirppakalai} \]
\[ (kk \rightarrow k) \quad (8) \]
\[ \rightarrow \text{cirppakkalai} \]
\[ (rp \rightarrow rpp) & \]
\[ (kk \rightarrow k) \quad (10) \]
\[ \rightarrow \text{cirppakkalai} \]
\[ (l \rightarrow l) \quad (9) \]

\[ \text{kalaiyalaku} \rightarrow \text{kalaiyalaku} \]
\[ (l \rightarrow l) \quad (4,7,10) \]
\[ \rightarrow \text{kalaiyalaku} \]
\[ (l \rightarrow l) & \]
\[ (l \rightarrow l) \quad (6) \]
\[ \rightarrow \text{kalaiyalaku} \]
\[ (l \rightarrow l) \quad (8) \]

\[ \text{murukku} \rightarrow \text{murukku} \]
\[ \rightarrow \text{mu ru:kku} \]
\[ (r \rightarrow r) \quad (4,6,7,8) \]

\[ \text{nilavu veliccam} \rightarrow \text{nilavu coliccam} \]
\[ (v \rightarrow c) & \]
\[ (l \rightarrow l) \quad (8) \]

5.4.1.1.3.1.2 Kurumba in Class - 5
a:ppil \rightarrow a:ppil
\rightarrow appul
\rightarrow appil
\rightarrow \text{appil} \]
\[ (l \rightarrow l) \quad (1,2,5,6,7) \]
\[ \rightarrow \text{a:ppil} \]
\[ (l \rightarrow l) \quad (4) \]
<table>
<thead>
<tr>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>urulaikkilanku</td>
<td>urulaikilaŋku</td>
</tr>
<tr>
<td>( (kk \to k) )</td>
<td>( (kk \to k) )</td>
</tr>
<tr>
<td>( (1 \to 1) ) &amp;</td>
<td>( (1 \to 1) ) &amp;</td>
</tr>
<tr>
<td>( (\hat{n} \to k) )</td>
<td>( (\hat{n} \to k) )</td>
</tr>
<tr>
<td>urulaikilaŋku</td>
<td>urulaikilaŋku</td>
</tr>
<tr>
<td>( (1 \to 1) ) &amp;</td>
<td>( (1 \to 1) ) &amp;</td>
</tr>
<tr>
<td>( (kk \to k) )</td>
<td>( (kk \to k) )</td>
</tr>
<tr>
<td>urulaikilakku</td>
<td>urulaikilakku</td>
</tr>
<tr>
<td>( (1 \to 1) ) &amp;</td>
<td>( (1 \to 1) ) &amp;</td>
</tr>
<tr>
<td>( (kk \to k) )</td>
<td>( (kk \to k) )</td>
</tr>
<tr>
<td>( (\hat{n} \to k) )</td>
<td>( (\hat{n} \to k) )</td>
</tr>
<tr>
<td>urulaikkilaŋku</td>
<td>urulaikkilaŋku</td>
</tr>
<tr>
<td>( (1 \to 1) ) &amp;</td>
<td>( (1 \to 1) ) &amp;</td>
</tr>
<tr>
<td>( (kk \to k) )</td>
<td>( (kk \to k) )</td>
</tr>
<tr>
<td>( (\hat{n} \to k) )</td>
<td>( (\hat{n} \to k) )</td>
</tr>
<tr>
<td>pa:skara:</td>
<td>pa:skara:</td>
</tr>
<tr>
<td>( (s \to s) )</td>
<td>( (s \to s) )</td>
</tr>
<tr>
<td>tantacco:ru</td>
<td>tattai co:ru</td>
</tr>
<tr>
<td>( (n \to t) )</td>
<td>( (n \to t) )</td>
</tr>
<tr>
<td>( (cc + c) ) &amp;</td>
<td>( (cc + c) ) &amp;</td>
</tr>
<tr>
<td>( (r \to r) )</td>
<td>( (r \to r) )</td>
</tr>
<tr>
<td>tantai co:ru</td>
<td>tantai co:ru</td>
</tr>
<tr>
<td>( (n \to n) )</td>
<td>( (n \to n) )</td>
</tr>
<tr>
<td>( (cc + c) )</td>
<td>( (cc + c) )</td>
</tr>
<tr>
<td>tantai coru</td>
<td>tantai coru</td>
</tr>
<tr>
<td>( (t \to t) )</td>
<td>( (t \to t) )</td>
</tr>
<tr>
<td>( (n \to n) ) &amp;</td>
<td>( (n \to n) ) &amp;</td>
</tr>
<tr>
<td>( (cc \to c) )</td>
<td>( (cc \to c) )</td>
</tr>
</tbody>
</table>
\[\text{cenpaka:tavi} \rightarrow \text{cenpakata:vi}\]
\[\text{cenpaka:tavi} \rightarrow \text{cenpakkata:vi}\]
\[\text{cenpakkata:vi} \rightarrow \text{cenpakatavi}\]

\[\text{ce:nam} \rightarrow \text{ce:nam}\]
\[\text{ce:nam} \rightarrow \text{cenam}\]
\[\text{ce:nam} \rightarrow \text{conam}\]

\[\text{me:rpuram} \rightarrow \text{nerpuram}\]
\[\text{me:rpuram} \rightarrow \text{mo:lpuram}\]
\[\text{me:rpuram} \rightarrow \text{mailpuram}\]

\[\text{me:rpuram} \rightarrow \text{morpuram}\]
\[\text{me:rpuram} \rightarrow \text{no:rpuram}\]

(10)
(1,4,5,6,7,8)
(1,2,7)
(4)
(2)
(4,5)
(6,8)
(7)
5.4.1.1.3.1.3 Irula in Class - 4

\[ \text{ilaiñarkal} \rightarrow \text{ilacñarkal} \]
\[ (L \rightarrow L) \] & \[ (\phi \rightarrow c) \] \hspace{1cm} (3)
\[ \rightarrow \text{ilañarkal} \]
\[ (L \rightarrow L) \] & \[ (4) \]
\[ \rightarrow \text{ilaiñarkal} \]
\[ (L \rightarrow L) \] & \[ (5) \]
\[ \rightarrow \text{ilaññarkal} \]
\[ (L \rightarrow L) \] & \[ (n \rightarrow nn) \] \hspace{1cm} (6)
→ ilainarkal
(1 → 1)
(\(\bar{n} \rightarrow n\)) &
(r → r)
(8)
→ ilainarkal
(\(\bar{n} \rightarrow n\)) &
(r → r)
(9)

→ te:vitta:ka
tevitta:ta
(t → k)
(5)
→ te:vitata
(tt → t)
(4)

→ te:kkay
te:ńka:y
(\(\bar{n} \rightarrow k\))
(3)

→ toppaya:łaku
toppalaku
(\(\varnothing \rightarrow y\))
(1)
→ toppalaku
(1 → 1)
(5)
→ teppalaku
to:ppalaku
(l → 1)
(9)

→ torpa:y
to:rpai
→ terpai
→ toruppai
(\(\bar{r} \rightarrow r\))
(2, 4, 7)

→ cirpakalai
cirpakkalai
(kk → k)
(1, 3)
→ cirppakalai
cirpakkalai
(rp → rpp) &
(kk + k)
(2)


→ cipparkalai

(\(r \rightarrow p\)) &

(\(l \rightarrow l\))

(4)

→ cirpakalai

(\(r \rightarrow r\))

(5)

→ cirppakkalai

(\(rp \rightarrow rpp\))

(9)

→ cemmatta

(\(n \rightarrow t\))

(3)

\(cemma:ntu\) → \(cemma:tu\)

(\(n \rightarrow \phi\))

(5)

\(kalaiyalaku\) → \(kaliya:laku\)

(2, 3, 5, 8)

\(kalaiyalaku\) → \(kalaiyalaku\)

(\(l \rightarrow l\))

(6, 9)

\(murukku\) → \(murukku\)

(\(r \rightarrow r\))

(1, 3, 4, 9)

→ \(muru\)(ku)

(\(kk \rightarrow k\))

(7)

\(nilavu veliccam\) → \(nilavu ve:\lacam\)

(\(l \rightarrow l\)) &

(\(cc \rightarrow c\))

(4)

5.4.1.3.1.4 Irula in Class - 5

\(a:ppil\) → \(a:ppil\)
uru 1 a ikki lanku → urulaikikaňku
(σk → k) &
(l → l) (1)

→ urulaikikaňku
(σk → k)
(2)

→ urulaikikaňku
(σk → k) &
(l → l) (6,10)

→ urulaikikaňku
(σr → r) &
(l → l) (7)

→ urulaikikaňku
(σk → k)
(l → l) &
(l → l) (8)

pa:skara → paskara
(σr → r) (6,10)

tantacco:ru → tantaicco:rru

→ tantai coru
(σr → r) (1,3,9)

→ tantaceru

→ tantaicoru
(n → n) (6,9)
<table>
<thead>
<tr>
<th>Cenpa:ktavi</th>
<th>Cenpakakatavi</th>
<th>(n → n)</th>
<th>(1, 3, 5, 7, 8, 9, 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ce:nam</td>
<td>Ce:nam</td>
<td>Conam</td>
<td>Cenam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(n → n)</td>
</tr>
<tr>
<td>Me:rpuram</td>
<td>Me:rpuram</td>
<td>Me:rpuram</td>
<td>Rppuram</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Merpuram</td>
<td>(r → r)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Metpuram</td>
<td>(r → t) &amp; (r → r)</td>
</tr>
<tr>
<td>Mullanki</td>
<td>Mullanki</td>
<td></td>
<td>(1 + 1)</td>
</tr>
<tr>
<td>Nutpam</td>
<td>Nu:lpam</td>
<td>(t → l)</td>
<td>Pppam</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutpam</td>
<td>(n → n)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutpam</td>
<td>(t → r)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nuppam</td>
<td>(t → p)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nuppam</td>
<td>(t → r)</td>
</tr>
</tbody>
</table>
### 5.4.1.1.3.1.5 Paniya in Class - 4

<table>
<thead>
<tr>
<th>Rule</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ilainarkal</td>
<td>( \rightarrow ) ilainarkal ( (l \rightarrow l) ) ( (1) )</td>
</tr>
<tr>
<td>tevitta:ta</td>
<td>( \rightarrow ) te:vittaka ( (t \rightarrow k) ) ( (1) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>tevittakai ( (t \rightarrow k) ) ( (3) )</td>
</tr>
<tr>
<td>toppalaku</td>
<td>( \rightarrow ) toppalaku ( (l \rightarrow l) ) ( (1,5) )</td>
</tr>
<tr>
<td>toppalaku</td>
<td>( \rightarrow ) torpay ( (r \rightarrow r) ) ( (1) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>torpayi ( (r \rightarrow r) ) ( (5) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>toppai ( (r \rightarrow p) ) ( (4) )</td>
</tr>
<tr>
<td>cirppakalai</td>
<td>( \rightarrow ) cirppakalai ( (r \rightarrow r) ) ( (1) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>(pp + pp) &amp; ( (kk + k) ) ( (1) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>cippakkalai ( (r \rightarrow p) ) ( (5) )</td>
</tr>
<tr>
<td>kalaiyalaku</td>
<td>( \rightarrow ) kalaiyalaku ( (l \rightarrow l) ) ( (5) )</td>
</tr>
<tr>
<td>&amp;</td>
<td>kalaiya:laiku ( (l \rightarrow l) ) ( (6) )</td>
</tr>
<tr>
<td>murukku</td>
<td>( \rightarrow ) murukku ( (r \rightarrow r) ) ( (1,2,3,4,5, \ldots) )</td>
</tr>
</tbody>
</table>
\[ \text{nilavu veliccam} \rightarrow \text{nilapu veliccam} \]
\( (v \rightarrow p) \)  

(3)

5.4.1.1.3.1.6 Paniya in Class \(-5\)

\[
\begin{align*}
\text{a:ppil} & \rightarrow \text{a:ppil} \\
& (l \rightarrow l) \\
\text{urulaikkila\text{"n}ku} & \rightarrow \text{urule:kila\text{"n}ku} \\
& (l \rightarrow l) \\
& \rightarrow \text{urulaikkila\text{"n}ku} \\
& (l \rightarrow l) \\
& \rightarrow \text{urulaikkila\text{"n}ku} \\
& (l \rightarrow l) \\
\text{pa:skara:} & \rightarrow \text{va:skara} \\
& (p \rightarrow v) & (s \rightarrow s) \\
\text{tantacco:ru} & \rightarrow \text{tantai cco:ru} \\
& (n \rightarrow n) \\
& \rightarrow \text{cenpakatavi} \\
& (n \rightarrow n) & (t \rightarrow t) \\
\text{ce:nam} & \rightarrow \text{ce:nam} \\
& \rightarrow \text{cenam} \\
& (n \rightarrow n) \\
\text{me:rpuram} & \rightarrow \text{me:lpuram} \\
& (r \rightarrow l) \\
& \rightarrow \text{me:rppuram} \\
& (r \rightarrow r)
\end{align*}
\]
5.4.1.1.3.2 Errors in the Vowels

5.4.1.1.3.2.1 Kurumbag Class - 4

mullaňki → mulle:ňki
(l → l) (6)

nutpam → nurpam
(t → r) (9)

\[
\begin{align*}
tevitta:ta & \rightarrow te:vittata \\
& (e \rightarrow e:) \& \\
& (a: \rightarrow a) \quad (4) \\
& \rightarrow te:vittata \\
& (a: \rightarrow a) \quad (8) \\
& \rightarrow to:ttata \\
& (e \rightarrow o:) \quad (10)
\end{align*}
\]

teňka:y → teňka:y
(a: \rightarrow a) (4)

\[
\begin{align*}
& \rightarrow teňka:y \\
& (e: \rightarrow e) \quad (6,8) \\
& \rightarrow toňkay \\
& e: o:) \& \\
& (a: \rightarrow a) \quad (10)
\end{align*}
\]

toppalaku → teppalaku
(o: \rightarrow e;) (4,8)

\[
\begin{align*}
& \rightarrow toppa:alaku \\
& (o: \rightarrow o) \quad (6) \\
& \rightarrow toppalaku \\
& (o: \rightarrow o) \quad (10)
\end{align*}
\]

torpa:i → torpa:y
(o: \rightarrow o) \&
(a \rightarrow a:) (6)
1.1.3.2.2 Kurumba in Class — 5

a:ppil
→ appul
  → appil
  → appil
    (a: → a) (2,5,7,8)
  → appul
    (i → u) (2)

pa:skara:
→ vaskara
  (a: → a) (5)

tanntacco:ru
→ ta:ntai coru
  → tantai co:ru
  → tantai co:ru
    (a:→ ai) (1,6,7,10)
  → ta:ntai coru
    (a → a:) &
    (o: → o) (1)
\[ \rightarrow \text{tanta}i \text{co:ru} \]
\[
\begin{align*}
\text{cenpaka:tav}i & \rightarrow \text{cenpakata:vi} \\
\rightarrow & \text{cenpakatavi} \\
\rightarrow & \text{conpakkata:vi} \\
& (a: \rightarrow a) \\
\rightarrow & \text{conpaka:tavi} \\
& (e \rightarrow o) \\
\text{ce:nam} & \rightarrow \text{cenam} \\
& (e: \rightarrow e) \\
\rightarrow & \text{conam} \\
& (e: \rightarrow o) \\
\text{me:rpu ram} & \rightarrow \text{mollpuram} \\
& (e: \rightarrow o:)
\end{align*}
\]
\[
\begin{align*}
\rightarrow & \text{mailpuram} \\
& (e: \rightarrow ai) \\
\rightarrow & \text{morpuram} \\
& (e: \rightarrow o) \\
\rightarrow & \text{mulla:ñki}
\end{align*}
\]
\[
\begin{align*}
\text{mulla:ñki} & \rightarrow \text{mullá:ñki} \\
& (a: \rightarrow a:)
\end{align*}
\]
\[
\begin{align*}
\text{nakai} & \rightarrow \text{na:kai} \\
& (a: \rightarrow a:)
\end{align*}
\]
\[
\begin{align*}
\text{nutpam} & \rightarrow \text{nutpa:m} \\
& (a: \rightarrow a:)
\end{align*}
\]
\[
\begin{align*}
\rightarrow & \text{nutpam} \\
\rightarrow & \text{nutpam} \\
& (u: \rightarrow u:)
\end{align*}
\]
5.4.1.1.3.2.3 Irula in Class - 4

te:vitt:ta:ta → te:vvottata:
   → to:vit:ta:
   → te:itt:ta:
   → te:vivata
   → to:vt:ta:
   (a → a) (1,2,3,4,9)

-te:vitta:ta:
   → to:ttata
   (e → o) (2,9)

-te:vit:ta:
   (e → e:) (4)

to:ppalaku → toppaya:1aku
   → toppa:1aku
   → toppalaku
   (o → o) (1,2,6,7)
to:rpai

→ toppaya:1aku
→ toppa:1aku
   (a → a:)
→ teppalaku
→ teppalaku
   (o: → e)
   (1,2)
   (4,9)
t oppaya:1aku

→ torpa:y
→ torpa:y
→ torpai
→ toruppai
   (o: → o)
   (2,5,6,7)
→ terpay

→ terpai
   (o: → e)
   (3,4)
→ te:rpai
   (o: → e:)
   (9)

cemma:ntu

→ cemma:ntu
→ cemmatta
   (a: → a)
   (1,3,7,9)
→ cemmatta
   (u → a)
   (3)
→ ce:mma:ntu
   (e → e:)
   (6)
kaliyalaku

→ kaliya:1aku
→ kalaiya:1aku
   (a → a:)
   (1,2)
murukku

→ murakku
   (u → a)
   (8)
→ mu:rukku
   (u → u:)
   (9)
\[ \text{nilavu veliccam} \rightarrow \text{nilavu velicca:m} \]
\[ (e \rightarrow 0) \& \]
\[ (a \rightarrow a:) \]  \hspace{1cm} (2) \]
\[ \rightarrow \text{nilavuve: lacam} \]
\[ (i \rightarrow a) \& (e \rightarrow e:) \]  \hspace{1cm} (4) \]
\[ \rightarrow \text{nilavu veluccam} \]
\[ (i \rightarrow u) \]  \hspace{1cm} (5) \]
\[ \rightarrow \text{nilavu veliccam} \]
\[ (i \rightarrow i:) \]  \hspace{1cm} (9) \]

5.4.1.1.3.2.4 **Irula in Class - 5**

\[ \text{a:ppil} \rightarrow \text{appil} \]
\[ \rightarrow \text{appil} \]
\[ (a: \rightarrow a) \]  \hspace{1cm} (1,3,6,8,9) \]
\[ \text{pa:skara:} \rightarrow \text{paskkara} \]
\[ \rightarrow \text{paskara} \]
\[ \rightarrow \text{paska:ra} \]
\[ \rightarrow \text{pa:skara:ra} \]
\[ \rightarrow \text{pa:skara} \]
\[ (a: \rightarrow a) \]  \hspace{1cm} (1,6,7,8,9,10) \]
\[ \text{tantacco:ru} \rightarrow \text{tantaico:rru} \]
\[ \rightarrow \text{tantaicor} \]
\[ \rightarrow \text{tantaiccor:ru} \]
\[ \rightarrow \text{tantaicor} \]
\[ (a \rightarrow ai) \]  \hspace{1cm} (1,3,7,9) \]
\[ \rightarrow \text{tantaicor} \]
\[ \rightarrow \text{tantaicor} \]
\[ (o: \rightarrow o) \]  \hspace{1cm} (3,9) \]
1.1.3.2.5 Paniya in Class - 4

tevitta:ta          →  tevittaka:i
                 (a: → a) &
                 (a → ai) (3)

5.4.1.1.3.2.5 Paniya in Class - 4
5.4.1.1.3.2.6 Paniya in Class - 5

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>urulaikkilaṅku</td>
<td>→ urule:kilaṅku</td>
</tr>
<tr>
<td>pa:skara:</td>
<td>→ vaska:ra</td>
</tr>
<tr>
<td>kalaiyalaku</td>
<td>→ kal ya:laṅku</td>
</tr>
<tr>
<td>nilavu veliccam</td>
<td>→ nalavu veliccam</td>
</tr>
<tr>
<td>ce:mma:ntu</td>
<td>→ cemma:ntu</td>
</tr>
<tr>
<td>to:ppalaku</td>
<td>→ toppalaku</td>
</tr>
<tr>
<td>to:rpai</td>
<td>→ torpay</td>
</tr>
<tr>
<td>te:nka:y</td>
<td>→ to:nka:y</td>
</tr>
<tr>
<td>te:ftka:y</td>
<td>→ to:nka:y</td>
</tr>
<tr>
<td>te:vittaka</td>
<td>+ te:vittaka</td>
</tr>
<tr>
<td>te:ftka:y</td>
<td>→ to:nka:y</td>
</tr>
<tr>
<td>to:ppalaku</td>
<td>→ toppalaku</td>
</tr>
<tr>
<td>to:rpai</td>
<td>→ torpay</td>
</tr>
<tr>
<td>ce:mma:ntu</td>
<td>→ cemma:ntu</td>
</tr>
<tr>
<td>kalaiyalaku</td>
<td>→ kal ya:laṅku</td>
</tr>
<tr>
<td>nilavu veliccam</td>
<td>→ nalavu veliccam</td>
</tr>
</tbody>
</table>

(1) (2) (3) (4) (5) (6)
tantacco:ru → tantaicco:ru
   (a → ai) (2, 3, 10, 4)
cenpakatavi  → cenpakatavi
   (aː → a) (3)
nakaːi → nakaːi
   (a → aː) (6)
uːtpam → nampam
   (u → a) (3)
   → uːtpam:m
   (a → aː) (4)
   → uːtpam
   (u → uː) &
   → (a → aː) (6)
   → uːtpam
   (u → uː) (10)
5.4.1.4 Process Errors

5.4.1.4.1 Errors through Addition

5.4.1.4.1.1 Kurumba in Class-4

\[
\begin{align*}
\text{ilaiñarkal} & \rightarrow \text{ilaiñarkal} \\
(\emptyset \rightarrow \bar{n}) & \quad (10)
\end{align*}
\]

\[
\begin{align*}
to:rpai & \rightarrow to:rppai \\
(\emptyset \rightarrow p) & \quad (9)
\end{align*}
\]

\[
\begin{align*}
\rightarrow to:rppaiy \\
(\emptyset \rightarrow p) & \& \\
(\emptyset \rightarrow y) & \quad (10)
\end{align*}
\]

\[
\begin{align*}
cirppakkalai & \rightarrow ciruppakkalai \\
(\emptyset \rightarrow u) & \& \\
(\emptyset \rightarrow p) & \quad (4)
\end{align*}
\]

\[
\begin{align*}
\rightarrow cirppakalai \\
(\emptyset \rightarrow p) & \quad (6)
\end{align*}
\]

\[
\begin{align*}
\rightarrow cirppakkalai \\
(\emptyset \rightarrow p) & \quad (9)
\end{align*}
\]

\[
\begin{align*}
\rightarrow cirppakalai \\
(\emptyset \rightarrow p) & \quad (10)
\end{align*}
\]

5.4.1.4.1.2 Kurumba in Class-5

\[
\begin{align*}
cenpaka:tavi & \rightarrow conpakkata:vi \\
(\emptyset \rightarrow k) & \quad (7)
\end{align*}
\]
5.4.1.1.4.1.3 Irula in Class-4

ilaiṅarkal → ilaiyanaṅrkal
(∅ → ya) (2)

→ ilacṅarkal
(∅ → c) (3)

→ ilaṅṅarkal
(∅ → n) (6)

→ iṅṅarkal
(∅ → ū) (7)

tenka:y → teṅkayai
(∅ → ai) (7)

toppalaku → toppaya:ḷaku
(∅ → ay) (1)

cirppakkalai → cirppakalai
(∅ → p) (2)

→ cirppakkalai
(∅ → p) (9)
5.4.1.1.4.1.4 Irula in Class - 5

pa:skara: + pas kkara 
(∅ → k) (1)

taŋṭaccoru + taŋṭaiccorru 
(∅ → r) (1)

me:ṛpuram + me:ṛppuram 
(∅ / → p) (1)

nutpam + nulppam 
(∅ → p)

5.4.1.1.4.1.5 Paniya in Class-4

to:ṛpai + torpayi 
(∅ → i) (5)

+ to:ppai 
(∅ → p) (4)

cirpakkalai + cirppakkalai 
(∅ → p) (1)

5.4.1.1.4.1.6 Paniya in Class - 5

me:ṛpuram + me:ṛppuram 
(∅ → up) (6)
5.4.1.1.4.2 Errors Through Deletion

5.4.1.1.4.2.1 Kurumba in Class - 4

cirppakkalai → cirppakkalai

(kk → k) (6)

→ cirppakkalai

(kk → k) (8)

→ ciruppakkalai

(kk → k) (10)

5.4.1.1.4.2.2 Kurumba in Class - 5

urulaikilaṅku → urulaikilaṅku

→ urulaikilaṅku

→ urulaikilaṅku

→ urulaikilaṅku

→ urulaikilaṅku

(kk → k) (1,2,4,5,7,10)

→ urulakilaṅ

(kk → k) &

(ku → Ø) (8)

pa:skara: → va:kara:

(s → Ø) (8)
5.4.1.1.4.2.3 **Irula in Class - 4**

- **tévittátá** → **te:vitata**
  
  $$(tt + t)$$

- **cìrppakalai** → **cirppakalai**
  
  $$(kk \rightarrow k)$$

- **cëm²mata** → **cemmatu**
  
  $$(n \rightarrow \emptyset)$$

- **mùrùkku** → **muruku**
  
  $$(kk \rightarrow k)$$

- **nilava velëccam** → **nilavu ve:lcam**
  
  $$(cc \rightarrow c)$$

5.4.1.1.4.2.4 **Irula in Class - 5**

- **urulai+kìlànku** → **urulaikilaŋku**
  
  $$(kk \rightarrow k)$$

  $$(1, 2, 6, 8, 10)$$
\[ \text{tantacco:ru} \rightarrow \text{tantaicoru} \]
\[ \rightarrow \text{tantacco:ru} \]
\[ \rightarrow \text{tantaicoru} \]
\[ \rightarrow \text{tantaicoru} \]
\[ (cc + c) \quad (3,5,6,9) \]

5.4.1.1.4.2.5 **Paniya in Class - 4**

\[ \text{ilaiñarkal} \rightarrow \text{ilaiñcarkal} \]
\[ \rightarrow (\emptyset + c) \quad (6) \]
\[ \text{cir:pakkalai} \rightarrow \text{cirppakalai} \]
\[ (kk + k) \quad (1) \]
\[ \rightarrow \text{ciruppakalai} \]
\[ (kk + \kappa) \quad (6) \]

5.4.1.1.4.2.6 **Paniya in Class - 5**

\[ \text{urulaikkilañku} \rightarrow \text{urule:kilañku} \]
\[ (kk + k) \quad (6) \]
\[ \text{tantacco:ru} \rightarrow \text{tantaico:ru} \]
\[ (cc + c) \quad (3,10) \]

5.4.1.1.4.3 **Errors through replacement**

5.4.1.1.4.3.1 **Kurumba in Class - 4**

\[ \text{ilaiñarkal} \rightarrow \text{ilaiñarkal} \]
\[ (1 \rightarrow 1) \quad (6,8,10) \]
\begin{align*}
tevittata & \rightarrow te:vidtatn \\
& (a: \rightarrow a) \land \\
& (e \rightarrow e:) \quad (4) \\
te:nka & \rightarrow te:nkay \\
& (a: \rightarrow a) \quad (4) \\
toppalaku & \rightarrow te:ppalaku \\
& (\underbrace{1 + 1} \land \\
& (o: \rightarrow e:) \quad (4,8) \\
& \rightarrow toppala:aku \\
& (\underbrace{1 + 1} \land \\
& (o: \rightarrow o) \quad (6) \\
torpa: & \rightarrow to:rpai \\
& (r \rightarrow r) \\
& \rightarrow torpa:y \quad (10) \\
& (ai \rightarrow a:y) \quad (6) \\
cirppakalai & \rightarrow cirppakalai \\
& (l \rightarrow l) \quad (6) \\
cemma:ntu & \rightarrow cemma:ntu \\
& (a: \rightarrow a) \quad (4,8) \\
Kalaiyalaku & \rightarrow kalaiyalaku \\
& (\underbrace{1 \rightarrow l}) \quad (4,7,10)
\end{align*}
→ kalaiyalaku

(\(1 \rightarrow 1\)) & (6)

(\( \overline{a} \rightarrow \overline{a}\))

→ ka: lalaiyalaku

(a + a:) &

(\(1 \rightarrow 1\)) (8)

murukku → murukku

(r \rightarrow r) (4, 6, 7)

nilavu veliccam → nilavu veliccam

(a \rightarrow ai) &

(a \rightarrow e) (4)

→ nilavu veiluccam

(e \rightarrow e:) &

(i \rightarrow u) (7)

5.5.1.1.4.3.2 Kurumba in Class - 5

appil → appil

(l \rightarrow 1) (1)

→ appul

(a: \rightarrow a) &

(i \rightarrow u) (2)

→ appil

(a: \rightarrow a) &

(l \rightarrow 1) (5, 7, 8)
\[
\text{urulaikkilanku} \rightarrow \text{urulaikkilanku} \\
(1 \rightarrow 1) \& \\
(1 \rightarrow 1) \\
\text{urulaikkilanku} \\
(1 \rightarrow 1) \\
\text{urulaikkilakku} \\
(1 \rightarrow 1) \& \\
(n \rightarrow k) \\
\text{urulaikkilanku} \\
(1 \rightarrow 1) \\
\text{Pa:skara:} \\
\rightarrow \text{Pa:skara:} \\
(s \rightarrow s) \\
\rightarrow \text{vaskara} \\
(\text{p} \rightarrow v) \& \\
(a : \rightarrow a)
\]
\[
\begin{align*}
tantacco:ru & \rightarrow tantaico:ru \\
(n \rightarrow t) \\
(a \rightarrow ai) \land \\
(r \rightarrow r) & \quad (4,8) \\
\rightarrow tantai co:ru \\
(n \rightarrow n) \land \\
(a \rightarrow ai) & \quad (6) \\
\rightarrow tantaicoru \\
(a \rightarrow a:) \\
(a \rightarrow ai) \land \\
(o: \rightarrow o) & \quad (1) \\
\end{align*}
\]
<table>
<thead>
<tr>
<th>ce:nam (\rightarrow)</th>
<th>ce:nam (\rightarrow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n \rightarrow n) (\rightarrow) cenam (e \rightarrow e) &amp; (n \rightarrow n) (\rightarrow) cenam (e \rightarrow o) &amp; (n \rightarrow n) (\rightarrow) cenam (e \rightarrow e) &amp; (n \rightarrow n) (\rightarrow) nerpuram (m \rightarrow n) (e \rightarrow e) &amp; (r \rightarrow r) (\rightarrow) mo:1puram (e \rightarrow o:) (r \rightarrow 1) &amp; (r \rightarrow r) (\rightarrow) me:r(\subseteq)puram (r \rightarrow r) (\rightarrow)</td>
<td></td>
</tr>
</tbody>
</table>
mallañki

→ mullanñki
(a → a:)
(1)

→ mu:llañki
(u → u:)
(6)

→ mullañki
(1 → 1)
(4, 5)

→ mullañki
(11 → 11)
(7)

→ mullañki
(a → a:)
&
(11 → 11)
(8)

näkai

→ nä:kaí
(a → a:)
(7, 8)

nutpam

→ nuppam
(t → p)
(1)

→ nunpam
(t → n)
(4)

→ nutpa:m
(n → n)
&
(a → a:)
(7)
5.4.1.1.4.3.3  Irula in Class – 4

\[ \text{ilaiṇarkal} + \text{ilaiṇarkal} \]
\[ (n \rightarrow n) \& (r \rightarrow r) \quad (8) \]
\[ \text{ilaiṇarkal} + \text{ilaiṇarkal} \]
\[ (n \rightarrow n) \& (r \rightarrow r) \quad (5) \]
\[ \text{ilaiṇarkal} + \text{ilaiṇarkal} \]
\[ (n \rightarrow n) \& (r \rightarrow r) \quad (9) \]

\[ \text{tevitta:ta} + \text{teviṭata} \]
\[ (e \rightarrow e:) \& (a: \rightarrow a) \quad (4) \]
\[ \text{tevitta:ta} + \text{tevitta:ta} \]
\[
\begin{align*}
&\text{te:ŋka:y} \quad \rightarrow \quad \text{te:ŋkai} \\
&\quad (a:y \rightarrow a:i) \quad (4)
\end{align*}
\[
\begin{align*}
&\text{nilavu veļiccam} \quad \rightarrow \quad \text{nilavu veļacam} \\
&\quad (e \rightarrow e:) \\
&\quad (1 \rightarrow 1) \& \\
&\quad (i \rightarrow a) \quad (4)
\end{align*}
\[
\begin{align*}
&\text{toppalaku} \quad \rightarrow \quad \text{toppayalaku} \\
&\quad \text{toppalaku} \\
&\quad \text{toppalaku} \\
&\quad (o: \rightarrow o) \& \\
&\quad (a \rightarrow a:) \quad (1,2,6,7)
\end{align*}
\[
\begin{align*}
&\text{terpay} \\
&\quad (o: \rightarrow e) \& \\
&\quad (1 \rightarrow 1) \quad (9)
\end{align*}
\]
torpa:y
(0: + 0) &
(ai \rightarrow a:y)
(2)

torpai
(o: + 0)
(6)

cemma:ntu \rightarrow cemma:ntu
(a: + a)
(1,7,9)

cemma:ntu \rightarrow cemma:ntu
(e \rightarrow e:)
(6)

kalaiyalaku \rightarrow kalaiyalaku
(l: + 1)
(2,3,5,8)

kalaiyalaku \rightarrow kalaiyalaku
(l: + 1)
(6,9)

kalaiyalaku \rightarrow kalaiyalaku
ka:la:iyalaku
(a \rightarrow a:)
(1,7)

murukku \rightarrow murukku
(r: + r)
(1,3,4)

murukku \rightarrow murukku
(u: + u:)
(9)
\[ \text{nilavu veliccam} \rightarrow \text{nilavu voliccam:} \]
\[
(\text{e} \rightarrow \text{a}) \quad \&

(\text{a} \rightarrow \text{a:})
\]
\[ \rightarrow \text{ni:lavu veliccam} \]
\[
(\text{i} \rightarrow \text{i:})
\]

5.4.1.1.4.3.4 Irula in Class 5

\[ \text{a:ppil} \rightarrow \text{a:ppil} \]
\[
(\text{l} \rightarrow \text{l})
\]
\[ \rightarrow \text{appil} \]
\[
(\text{a:} \rightarrow \text{a})
\]

\[ \text{urulaikkila}^\text{nku} \rightarrow \text{urulaikila}^\text{nku} \]
\[
(\text{1} \rightarrow \text{1})
\]
\[ \rightarrow \text{urulaikkila}^\text{nku} \]
\[
(\text{r} \rightarrow \text{r}) \quad \&

(\text{a} \rightarrow \text{a:})
\]
\[ \rightarrow \text{urulaikila}^\text{nku} \]
\[
(\text{l} \rightarrow \text{l})
\]
\[ \rightarrow \text{urulaikila}^\text{nki} \]
\[
(\text{i} \rightarrow \text{i})
\]
+$ urulaikilańku

$(1 \to 1) \&$

$(\frac{1}{2} \to 1)$

$paskaɾa:$

$paskaɾa$

$(a: \to a) \&$

$(r \to r)$

$paskaɾa$

$(a: \to a:)$

$(a: \to a)$

$paskaɾa$

$(r \to r) \&$

$(a: \to a)$

$tantaicco:ru$

$tantaicco:rru$

$(a \to ai) \&$

$(r \to r)$

$tantaicoru$

$(a \to ai)$

$(o: \to o) \&$

$(r \to r)$

$tantaceru$

$(n \to n)$

$(o: \to o) \&$

$(r \to r)$
tantaicoru

\[ (n \to n) \]
\[ (a \to ai) \]
\[ (o: + o) \]
\[ (r \to r) \]

\[ \text{cenpaka}: tavi \to \text{cenpakakatavi} \]

\[ (n \to n) \]
\[ (a: \to a) \]

\[ \text{cenpaka}: tavi \to \text{cenpaka}: tavi \]

\[ (e \to o) \]
\[ (n \to n) \]

\[ \text{cenpakatavi} \to \text{cenpakata} : vi \]

\[ (n \to n) \]
\[ (a: \to a:) \]

\[ \text{cenpaka}: ta: vi \to \text{cenpa}: katavi \]

\[ (n \to n) \]
\[ (a: \to a:) \]
$\text{ce:nam} \rightarrow \text{ce:nam}$

$\cdot$

$(n \rightarrow n)$

$(2,5,10)$

$\rightarrow \text{conam}$

$(e: \rightarrow o \cdot)$ &

$(n \rightarrow n)$

$(3,9)$

$\rightarrow \text{cenam}$

$(e: \rightarrow e \cdot$ &

$(n \rightarrow n)$

$(6)$

$\text{me:rpuram} \rightarrow \text{me:rpuram}$

$(r \rightarrow r)$

$(2)$

$\rightarrow \text{mo:rpuram}$

$(e: \rightarrow o:)$

$(3)$

$\rightarrow \text{metpuram}$

$(e: \rightarrow e \cdot$ &

$(r \rightarrow t)$

$(6)$

$\rightarrow \text{merpuram:}m$

$(r \rightarrow r \cdot$ &

$(a \rightarrow a:)$

$(7)$

$\rightarrow \text{merpuram}$

$(e: \rightarrow e \cdot$ &

$(r \rightarrow r)$

$(9)$
\[
\begin{align*}
\text{mullački} & \rightarrow \text{mullački} \\
& \quad (11 \rightarrow 11) \quad (5,6,8,10) \\
\text{nakai} & \rightarrow \text{naːkai} \\
& \quad (a \rightarrow aː) \quad (3) \\
\text{nutpam} & \rightarrow \text{nuːlppam} \\
& \quad (u \rightarrow uː) \& \\
& \quad (t \rightarrow l) \quad (1) \\
\text{nutpam} & \rightarrow \text{nutpam} \\
& \quad (n \rightarrow n) \quad (6) \\
\text{nurpam} & \rightarrow \text{nurpam} \\
& \quad (t \rightarrow r) \quad (7) \\
\text{nuppam} & \rightarrow \text{nuppam} \\
& \quad (n \rightarrow n) \& \\
& \quad (t \rightarrow p) \quad (8)
\end{align*}
\]
5.4.1.1.4.3.5 Paniya in Class-4

\[\begin{align*}
&+ \text{tevittaka} \\
&\quad (e + e:) \\
&\quad (a:+ a) & (t + k) & (1) \\
&+ \text{tevittata} \\
&\quad (a:+ a) & (5) \\
&+ \text{tevittakai} \\
&\quad (a:+ a) \\
&\quad (t + k) & (a + ai) & (3) \\
&+ \text{to:nkay} \\
&\quad (e:+ o:) & (a:+ a) & (4)
\end{align*}\]
to:ppalaku → toppalaku
\[(o: o) \& (1 + 1)\]  \hspace{1cm} (1,5)

to:rpai → torpay
\[(o: o) \& (r \rightarrow r) \& (ai + ay)\]  \hspace{1cm} (1)

+ to:ppai
\[(r \rightarrow p)\]  \hspace{1cm} (4)

+ torpayi
\[(o: o) \& (r \rightarrow r) \& (ai + ay)\]  \hspace{1cm} (5)

cirpakkalai → cirppakalai
\[(r + r)\]  \hspace{1cm} (1)

+ cippakkalai
\[(r + p)\]  \hspace{1cm} (5)

cemma:ntu → comma:ntu
\[(e \rightarrow o) \& (a: a)\]  \hspace{1cm} (1)
226

→ cemmanţu
(a: + a) (4,5)

kalaiyalaku → kalaiyalaiku
(a + a:) (a + ai) &
(1 + 1) (6)

murukku → murukku
(r ^ r) (1,3,4,5,6)

nilavu veliccam → nilapu veliccam
(v _ p) (3)

5.4.1.1.4.3.6 Paniya in Class-5

a:ppil → a:ppil
(1 + 1) (3)

urulaikkilaṅku → urulaikkilaṅku
(1 + 1) (9)

→ urulaikkilaṅku
(1 + 1) (10)

pa:skara: → pakkara:
(a: + a) & (s - k) (1)
va:ska:ra
(p + v)
(s + s)
(a + a:) &
(a: + a) (6)

tantacco:ru + tantaiocco:ru
(n + n) &
(a + ai) (2)

tantaico:ru
(a + ai) &
(r + r) (3, 10, 4)

tantacco:ru
(a + a:) (6)

cenpaka:tavi + cenpaka:tavi
(n + n) (2, 3, 4, 9)

me:rpuram + me:lpuram
(r + 1) (3)

me:rpuram
(r + r) (6)
\[
m\text{l\text{an}ki} \rightarrow m\text{ul\text{le\text{\}}\text{nki}} \\
\quad (l \rightarrow l) \& \\
\quad (a \rightarrow e) \quad (6)
\]

\[
n\text{a\text{kai}} \rightarrow n\text{\text{\}}\text{a:ki} \\
\quad (a \rightarrow a:) \quad (6)
\]

\[
n\text{u\text{t}pam} \rightarrow n\text{u\text{t}pam:m} \\
\quad (a \rightarrow a:) \quad (4)
\]

\[
\rightarrow n\text{u\text{t}pam:m} \\
\quad (u \rightarrow u:) \& \\
\quad (a \rightarrow a:) \quad (6,10)
\]

\[
\rightarrow n\text{urpam} \\
\quad (t \rightarrow r) \quad (9)
\]
5.4.1.1.5 Quantification of Dictation Test Errors

In the dictation test ten words were given to thirty students in Class-4 and another ten words were given to thirty students of Class-5. So altogether six hundred words samples were obtained as data for the error analysis. In this section the quantity of different types of errors committed by Class-4 and Class-5 students of the Nilgiris tribal schools was found out based on the six hundred words obtained from them. The number of errors were calculated on the basis of five parameters viz.,

1) sound types
2) position of sounds
3) the type of tribal students
4) the class of the students and
5) the process involved in the commitment of errors

These parameters have been duly employed in the classification of errors also.

With reference to the first parameter three kinds of errors and the number of errors occurring in each kind have been calculated.

Accordingly the number of errors found in vowels has been identified as 170. The number of errors in consonants has been calculated as 231 and the number of errors identified in clusters is found to be 46. When a comparison is made the number of errors in consonants is found to be high.
This is naturally in accordance with the number of consonants found in the language as well as in the words given for dictation.

On the basis of the parameter, namely, position of sounds three kinds of positions, namely, initial, medial and final positions were taken for the calculation of the number of errors. It was found that in the word initial position 21 errors occur, in the medial position 319 and in the final position 28 errors occur. Through the comparison of the number of errors occurring in the three positions one could arrive at the fact that the quantity of errors which occur in the word medial position is higher than those of the other positions. Because the number of sounds occurring in the word medial position is normally more, it is natural to expect more number of errors in the medial position.

On the basis of the third parameter, namely, 'tribe', the number of errors was calculated, and it was found that Kurumba students committed 138 errors, Irula students committed 183 errors and the Paniya students 79 errors. On comparison the number of errors committed by the three tribal students population concerned it was found that Irula students commit more errors. A different kind of interpretation has to be given with due support from the field experience. Irula students commit more errors because they are more involved in learning Tamil and their performance is better when compared to other tribal students in all other testing situations. The number of errors committed by the Irula students is less because the number of words they have supplied as data is less.
The investigator has to discard many words from the Paniya data because what the students have written as words are in no way comparable with the words given for dictation by the investigator. So, the errors quantified tribewise show a directly proportional relationship between the errors and the learning activity. That is the more the students involved in learning activity, the more will be the errors committed by them.

On the basis of the parameter, namely, 'Class' also errors were quantified. It was found that Class-4 students committed 120 errors and Class-5 students committed 234 errors. As in the case of tribe-wise calculation of errors, an interpretation can be given for classwise quantification of errors also. That is Class-5 students commit more errors because their involvement in learning Tamil is a degree higher than that of Class-4 students.

Errors were also quantified on the basis of the processes to which the sounds were subjected to. Addition, deletion and replacement are the three kinds of processes identified here. 26 errors appear as errors due to addition in the data, 39 errors appear as due to deletion and 310 errors appear due to replacement. Replacement based errors are more in number. It is evident that substitution is a common strategy adopted by students in their script learning process.
The investigator has also made a count of the number of words which were presented wrongly by more than two students. It was found that, of the 20 words given for dictation the following words appear to be more problematic because of their graphological and morphographic structure. That is why more than two students commit errors while writing these words. The following is the list of such words:

1) ilaìnarkaì
2) teviittâ:ta
3) to:ppalaku
4) cemma:ntu
5) kalaiyalaku
6) murukku
7) a:ppi1
8) urulaikkilanku
9) tanâacco:ru
10) cenpaka:tiavi
11) ce:âam
12) mu:ša:nki

Changing pattern of sounds has also been presented here in order to provide a summary statement of different type of changes students make in different type of sounds. A classification of the changing patterns has been made taking into account vowels, consonants
and clusters. In all 9 vowels, 13 consonants and 5 clusters manifest changes in the students data. Of these 5 vowels and 4 consonants were subjected to changes in more than two ways. The vowels subjected to change in this way are:

i) i, e, e:, a and o:

The consonants subjected to change in more than two ways are:

i) t, n, n, and r

The following list shows the changing patterns in sounds:

**Vowels**

i) i — a, u, i:

ii) e — e:, o, o:

iii) e: — e, o, o:, ai

iv) a — e, a:, ai

v) a: — a

vi) o: — e, e:, o

vii) u — a, u:

viii) ai — e:

ix) φ — u

**Consonants**

i) p — pp, v

ii) t — t, k

iii) t — p, t, k, n, r, r, l
iv) \( m \rightarrow n \)

v) \( n \rightarrow n, t, \phi \)

vi) \( n \rightarrow nn \)

vii) \( n \rightarrow i, n, n \)

viii) \( n \rightarrow n, nn, n \)

ix) \( n \rightarrow k \)

x) \( s \rightarrow s \)

xi) \( l \rightarrow l, l \)

xii) \( l \rightarrow l, l \)

xiii) \( l \rightarrow l, l \)

xiv) \( r \rightarrow r, p, l, t \)

xv) \( v \rightarrow c, p \)

xvi) \( \phi \rightarrow c, n, y \)

Clusters

i) \( pp \rightarrow p \)

ii) \( kk \rightarrow k \)

iii) \( \ddot{t} \rightarrow \ddot{t} \)

iv) \( cc \rightarrow c \)

v) \( n \rightarrow nn \)

vi) \( rp \rightarrow rpp \)
ERROR QUANTIFICATION

(Diagram 5.2: Error Quantification)
5.4.1.2 Free Composition

The following sections of this chapter include the analysis of errors committed by the students in the free composition. In free composition only a limited number of errors are attested. In this analysis due to the lack of sufficient data, the analysis is not based upon the variables viz. tribal groups and the educational level of the students. The errors in free composition are classified as:

1) use of inflectional increment
2) use of glide
3) influence of spoken language
4) use of case markers and
5) concord

The above errors are discussed in detail in the following pages.

5.4.1.2.1 Use of Inflectional Increment

The error attested in the use of inflectional increment is analysed below. The names of the tribes in whom the error is attested is given in brackets along with the examples.

* ciṅkavuṭan 'with the lion'

[ ciṅka-tt-uṭan (Kurumba)]

As per the sandhi rule that operates in the modern Tamil, all those forms which end in/m/ other than those forms of the type # C V m (where V stands for /a/) take the inflectional
increment -tt- when case suffixes are added to them. When this rule is operated the final \( m \rightarrow \emptyset / -tt \).

In the above example, however, contrary to the above sandhi rule, the inflectional increment -tt- has not been added but a glide -v- has been added due to the operation of the following rule.

\[ V_{nf} + V > V_{nf} VV \], where \( V_{nf} \) is a non-front vowel.

Thus in the above example it is observed that the inflectional increment has been dropped but a glide has been added which makes the example an erroneous one.

5.4.1.2.2 Use of the Glides

When a morepheme ending with a vowel is added to another morpheme beginning with a vowel there takes place a sandhi change in Tamil in the following manner:

\[ -V_f + V > -V_f VV \]

\[ -V_{nf} + V > -V_{nf} VV \]

Where \( V_f \) and \( V_{nf} \) denote front and non-front vowels respectively.

eg. \underline{kili} + ai > \underline{kiliyai} 'parrot' (acc.)

\underline{appa:} + \underline{utan} > \underline{appa:vuṭan} 'with father'
The above rule is called 'glide insertion rule' in Tamil. The operation of this rule helps the easy pronunciation of words. In free composition exercises some students are found to drop these glides creating erroneous forms. Such instances are presented below:

* **pallil** 'in the school'
  
  { **palliyyil** (Irula)}

* **pacukku** 'to the cow'
  
  { **pacuvukku** (Paniya)}

In the first example given above the first morpheme **pallil** ends with a front vowel -i and the second morpheme begins with a vowel (.article) and hence the glide -y- has to be added. Similarly, in the second example, the first morpheme ends with a non-front vowel -u and the second morpheme begins with the vowel -u and hence the glide -v- has to be added. In both these examples the glides have been dropped resulting in erroneous forms.

**5.4.1.2.3 Influence of the Spoken Variety of the Language**

The influence of spoken variety of L2 is found in all the levels of the language, in the free composition exercises. The attested errors are given below:
<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
<th>Language (Variant)</th>
</tr>
</thead>
<tbody>
<tr>
<td>yainaiki</td>
<td>'to the elephant'</td>
<td>ya:naikku (Kurumba)</td>
</tr>
<tr>
<td>cuttum</td>
<td>'will rotate-it'</td>
<td>currum (Kurumba)</td>
</tr>
<tr>
<td>nalla</td>
<td>'good (adv.)'</td>
<td>nanra:ka (Kurumba)</td>
</tr>
<tr>
<td>taranka</td>
<td>'give-they'</td>
<td>tarukira:rkal (Kurumba)</td>
</tr>
<tr>
<td>valattum</td>
<td>'that which is grown'</td>
<td>valarkkum (Irula)</td>
</tr>
<tr>
<td>valattina:1</td>
<td>'if grown'</td>
<td>valarttina:1 (Irula)</td>
</tr>
<tr>
<td>tinkum</td>
<td>'will eat-it'</td>
<td>tinnum (Irula)</td>
</tr>
<tr>
<td>toruttin</td>
<td>'drove away-he'</td>
<td>turattina:n (Irula)</td>
</tr>
<tr>
<td>elai</td>
<td>'leaf'</td>
<td>ilai (Paniya)</td>
</tr>
<tr>
<td>otaiccu</td>
<td>'having broken'</td>
<td>utaittu (Paniya)</td>
</tr>
</tbody>
</table>
5.4.1.2.4 Use of Case Markers

Case suffixes explain the relationship between the noun and the verb. Wrong use of case suffixes mar the meaning, and result in an error. The errors which occur in the use of case suffixes are given below. Sometimes the case markers have been used in the places where they are not necessary, and in some other cases they have been dropped.

i) **Unwanted (Redundant) Usage**

* mutaliyavarraiyai 'et cetra' (acc.)

[ mutaliyavarrai (Irula)]

ii) **Wrong Usage**

* vakuppin 'in the class'

[ vakuppi1 (Paniya)]

iii) **Incorrect Usage**

* ilaiyaiyum co:rum 'leaf and boiled rice'

[ ilaiyaiyum co:rraiyum (Paniya)]

Usually the accusative case marker may be either used or dropped in a construction (with neuter nouns). But in a conjunctive
construction of \(-\text{um}.... -\text{um}\) type, if the accusative case marker is used before the first \(-\text{um}\), then it has to be used in the case of second \(-\text{um}\) also.

Or it may be dropped completely. But in the last example given above it is found that the accusative case marker is used in one place and dropped in another place.

5.4.1.2.5 Concord Maintenance

According to the Tamil grammar the gender and number of the subject must have concordance with the predicate. This rule has been violated resulting in erroneous constructions.

* kaːlkal untu 'legs are there'

\[
\text{[ kaːlkal ullana (Kurumba)]}
\]

5.4.2 Speaking Errors

The errors found in the speech of the students are analysed in this section. The errors are mainly classified as:

1) errors in the phonological level and
2) errors in the grammatical level.
5.4.2.1 Phonological Level

The errors found in the phonological level with reference to the speaking exercises are analysed below:

* mutnatu 'dashed-it'
  [ muttiyatu (Kurumba)]

* pu:utum 'will flower-it'
  [ pu: vitum (Irula)]

* koiliŋkal 'chicks'
  [ kolikaI (Irula)]

* cattuvițu 'the action of dying' (comp.)
  [ cettuvlțu (Kurumba)]

* palam 'fruit'
  [ palam (Kurumba, Irula and Paniya)]

5.4.2.2 Grammatical Level

Grammatical level errors attested in the speaking exercises of the students are presented below:

* cinkavutan 'with the lion'
  [ cinkattuțan (Kurumba)]
Here the inflectional increment -tt- has been dropped resulting in an error.

* ko:li irukkinrana 'there is a chick'

[ ko:li irukkiratu (Irula)]

In the above example, there is no agreement found between the subject and predicate. As the subject is in singular, the predicate has also to be in singular.

A reverse case is also found in the following example where a plural subject is in concord relationship with the singular predicate producing an incorrect sentence.

* a:rukal ullatu 'there are rivers'

[ a:rukal ulla (Paniya)]