CHAPTER II
LITERATURE REVIEW

Introduction

The chapter will discuss about the history and development of dictionaries, the scripts that have to be used in developing MMD (Multilingual Manipuri Dictionary) i.e. English, Hindi and Manipuri Script's as preliminary investigations. Here it will discuss phonology of English language, Hindi language. Literature review will discuss about official status of Hindi language and a few things regarding the Devnagari scripts. analysis of a number of word entries on hard copies of Manipuri dictionaries available in Bengali script, available Hindi dictionaries and all Multilingual Dictionaries with their URLs. Lastly it will discuss about Manipuri language cultural and linguistics setting of Manipur and its main features, the history of the Meitei Mayek Script, the modern age of Manipuri Language and the development of Manipuri Language in current trends with NLP (Natural Language Processing).
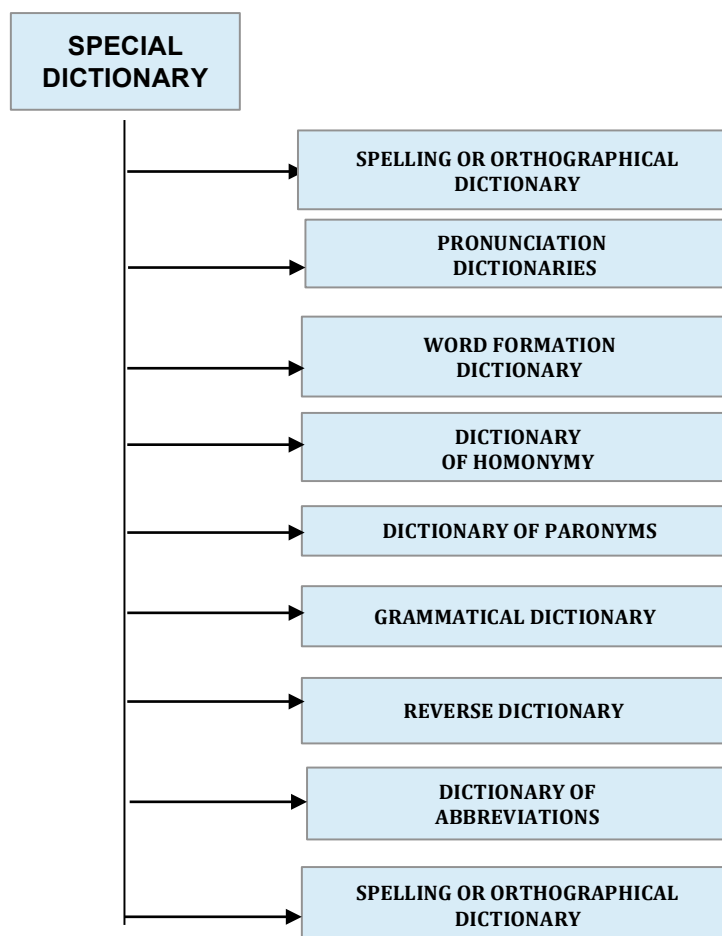
2.1 Preliminary Investigations

The British made the history of dictionary making. The major attempt of their dictionaries is to give corresponding meaning from source language to target language.

We are starting with the collection of Books, Journals and thesis reports in library of Assam University, Manipur University, Central Library, The Archival Library, the Manipur Archives and The Library of Manipur Legislative Assembly, and collection of Manipuri Scripts from the MEELAL office.

The year 1837 A.D. was a convenient landmark in the history of lexicography for Manipuri. Publication of the first dictionary involving Manipuri set forth: George Gordon, the British Political Agent of Manipur published "A Dictionary in English, Bengali and Manipuri." In 1857, William Pettigrew published his dictionary with the same title. These dictionaries have given grammatical information, to some extent. They contain the information on: sign of zodiac, the name of the planets, the various months, the days of the week, division of day, division of time, the numerals, the measure of the qualities, and punctuation marks in the appendices.

Special dictionaries classified on the basis of the formal aspects of the lexical units are of the following types:

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┌──────────────┐
│   SPECIAL    │
│  DICTIONARY  │
└──────┬───────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ SPELLING OR ORTHOGRAPHICAL       │
       │           │ DICTIONARY                       │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ PRONUNCIATION                    │
       │           │ DICTIONARIES                     │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ WORD FORMATION                   │
       │           │ DICTIONARY                       │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ DICTIONARY                       │
       │           │ OF HOMONYMY                      │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ DICTIONARY OF PARONYMS           │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ GRAMMATICAL DICTIONARY           │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ REVERSE DICTIONARY               │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       │           │ DICTIONARY OF                    │
       │           │ ABBREVIATIONS                    │
       │           └──────────────────────────────────┘
       │      ──→  ┌──────────────────────────────────┐
       └──────────→│ SPELLING OR ORTHOGRAPHICAL       │
                   │ DICTIONARY                       │
                   └──────────────────────────────────┘
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Figure 2: Types of Special Dictionary

1. **Spelling or orthographical dictionaries** give spelling of words with their phonetic variants. They give tones, stress and accents also, wherever relevant. To this group belong dictionaries, which give information whether words would be written together or separately. These dictionaries are normative in character and are used as reference points for correct spelling. Especially the foreigners also refer the general dictionaries for correct spelling. But the orthographical dictionaries differ from the general dictionaries in not giving any information other than spelling.

2. **Pronouncing dictionaries** record contemporary pronunciation. They are also normative and are referred to for correct pronunciation. The information supplied in

these dictionaries is different form the general dictionaries. They present variant pronunciation as well as the pronunciation of grammatical forms.

3. **Word formation or derivational dictionaries** give different word forming elements viz., prefixes, suffixes etc. Some of the learner's dictionaries attain the nature of word formation dictionaries in so for as they give list of prefixes and suffixes. To this class belong the dictionaries of roots, verbs etc. Whitney's Dictionary of Sanskrit verb root belongs to this class. The Dhatupaha of Panini is a dictionary of this group.

4. **Dictionaries of homonyms** present the homonyms of a language. Some of them give illustrative examples.

5. **Dictionaries of paronyms** give paronyms in the language.

6. **Grammatical dictionaries** are prepared to serve as guide or help book for the understanding of (correct) grammatical system of the language. This is more helpful, when the grammatical system of the language is very difficult and complex. In a grammatical dictionary, the whole grammatical structure of the language is given in the introduction. The different grammatical categories and paradigms are numbered. These numbers are given for gender, type of declension etc. These dictionaries are very useful for teachers of the language.

7. In **Reverse dictionaries** the entry words are arranged in the alphabetical order of their final letters. Their earlier counterparts are the Rhyming dictionaries, which were prepared as tools of aid for the poets for composing poems, as rhyming was very important for the purpose. The scope of these dictionaries has become very wide at present. In these dictionaries words with similar endings appear at one place, which give a sort of grammatical specification. Identical word forming suffixes and identical compound forming components are put at one place. These are very useful for preparing teaching materials and manuals.

8. **Dictionaries of abbreviations and acronyms** present the abbreviations and acronyms commonly used in a language. Many dictionaries give list of common abbreviations as appendices.

2.1.1 General Dictionary

The general dictionary, as stated earlier, covers the total language. The dictionary of any size may be a general dictionary. It contains words from all spheres of human activities and all areas of the life of the speakers of the language.

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┌─────────────────────────────────┐
│      GENERAL DICTIONARIES        │
└─────────────────────────────────┘
          ┌───────────┴───────────┐
┌──────────────────────┐  ┌──────────────────────┐
│ ACADEMIC OR NORMATIVE │  │   REFERENTIAL OR     │
│      DICTIONARY       │  │      OVERALL         │
│                       │  │    DESCRIPTIVE       │
└──────────────────────┘  └──────────────────────┘
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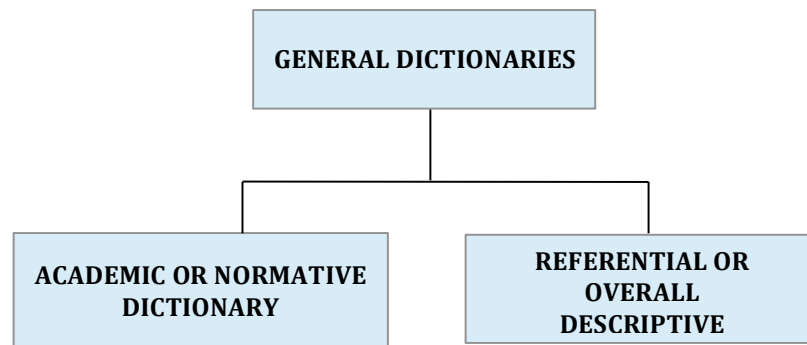
Figure 3: General Dictionary Types

1. **Academic or Normative dictionary**: The academic dictionary gives the lexical stock of the standard language. The aim of this dictionary is to present the language as it is expected to be and stop it from decay. It has an eye on the future usage of the language. The selection of entries is done from the works of the creative writers, may be both earlier and contemporary, literature of science, arts etc., newspapers, magazines and other materials, which are considered representative of the standard language. These dictionaries do not contain words of local or regional variation. Such words are included in the dictionaries only when they have been used by some writers and have been standardized in the language. The whole data in the dictionary represents a self contained and homogenous system. The chief feature of such dictionaries is their inclusion of profuse illustrative examples, which forms the corpus with or without citations. Different types of dictionaries including dictionaries of technical terms, grammatical dictionary, the spelling dictionary etc., come under this group.

2. **Referential or Overall Descriptive dictionary**: The referential or overall descriptive dictionary does not have any normative aim. The word stock of this dictionary is selected from different heterogeneous speech groups. The corpus includes not only literary texts but also oral literature. It contains words of regional, social and stylistic variations.

   According to Shcherba a reference dictionary is "one behind which does not lie any unified language consciousness. The collected words may belong to

heterogeneous speech groups of different periods and which do not in the least form a system (Srivastaba, 1968).

2.2 Manipuri Language

Manipuri is the official language of the state of Manipur. It is the lingual-franca for all groups of people. It has been included in the 8th schedule of the Indian constitution since 20th August 1992. Deliberations of the Manipur state Darbar (the highest Executive, Legislative and Judicial Body) were conducted in Manipuri: even the resolution of the Darbar was recorded in Manipuri in the past during the rule of the Maharajas. The state Government issued orders, notices and proclamations in this language in the past. Manipuri literature is rich; it has old literature in various genres, viz. poetry, prose, astronomy, herbal medicine, cosmology, ritual, myth and oral literature. Modern Manipuri literature has rich contributions in the fields of poetry, drama, novel, short story, essay, travelogue etc.

Manipuri, a language of Tibeto-Burman (TB) sub-family, is locally known as Meiteiron (the Meetei + Lon 'language'). It is basically spoken and understood by other communities of about 15.5 lakhs in the state according to 2001 census. There are native speakers also in the neighboring Northeastern states of India, mainly in Assam, Tripura, West Bengal (particularly in Brindavan, Radha Kunda). In Assam 3% of the total population speaks Manipuri; in Myanmar 1.5 lakh speak Manipuri while 0.5 lakhs speak in Manipuri in Bangladesh according to 1961 census as reported by Manipuri Sahitya Parishad Imphal. The state has officially recognized 32 Scheduled tribes speaking various mother tongues whose second language is Manipuri: they use it for their intergroup communication.

2.2.1 The Cultural and Linguistic setting of Manipur

Grierson (1903) in his LSI, Manipuri is briefly described: vowels, word categories, syllable, sentence type etc. However, neither of these words is exhaustive in its description; much of the phonology, morphology, word-formation, morphophonemic and morphosyntax have remained without description. Over and above, these works lack application of linguistic science. The first publication of primary work is of W. Tomchou (1986) 'Manipuri Grammar, P.C. Thoudam's (1991) T.D.C Remedial Manipuri Grammar and M.S. Ningomba's (1992) 'Meitei Lonmit'. Other works include unpublished works, 35 Master's and M.Phil. dissertations and

seven Ph.D. thesis. They are Madhubalas' Manipuri Grammar (1979), Yashawanta's some Aspects of Manipuri syntax (1984), Imoba's Perspectives of Manipuri Lexicography (problems and suggestions) (1985), Nonigopal's A Meitei Grammar of Roots and Affixes (1987) and Pramodini's Social Grammar of Meiteilon (1989). Finally, there is the work of Non-Manipuri linguist writings in English. Bhat and Ningomba's 'A Manual of Manipuri Grammar (1988) unpublished and Bhat's Grammatical Relations: evident against their Necessity and Universality (1991) and Inder Singh's Manipuri phonetic Reader (1975). Since the establishment of Department of Linguistics in Manipuri University in 1986, linguistic studies of the language are gradually increasing.

2.2.2 Linguistic Affinity

Manipuri belongs to the Sino-Tibetan family of languages. The Sino-Tibetan family branches out into the Siamese-Chinese and the Tibeto-Burman sub families based on the word order – the Siamese-Chinese has SVO word order while the Tibeto-Burman has SOV pattern, where S stands for Subject, V stands for Verb, and O stands for Object. A schematic diagram of the Sino-Tibetan language family is given below:
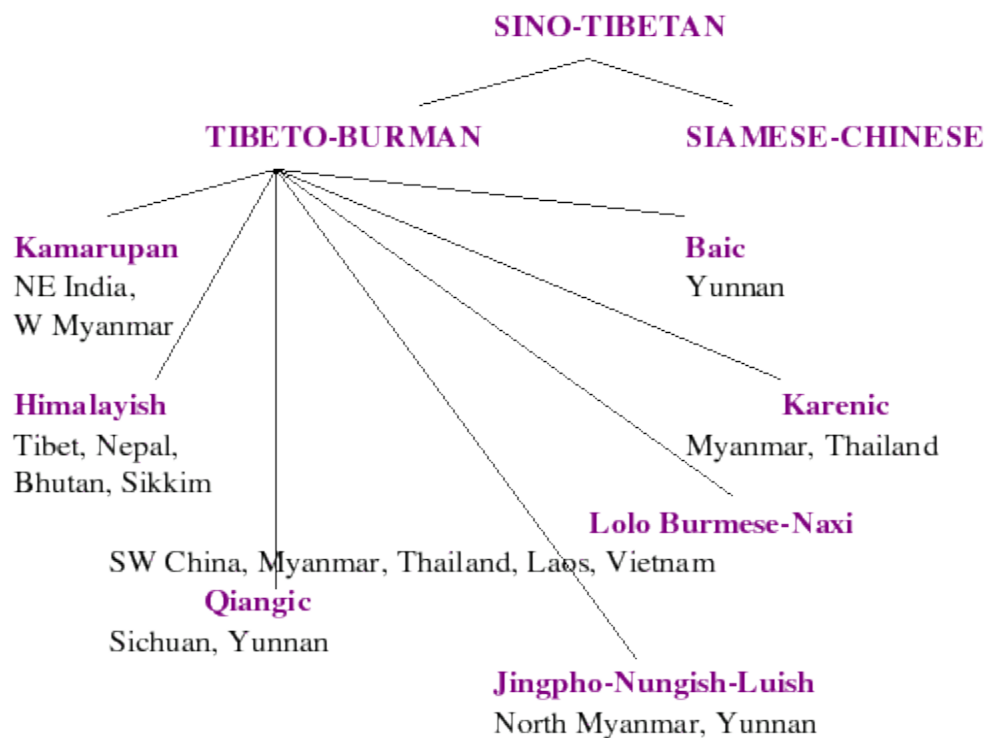
Figure 4: Schematic diagram of Sino-Tibetan

Manipuri falls in the geographically determined group Kamarupan. Kamarupan is further sub grouped into Kuki-Chin-Naga, Abor-Miri-Dafla and Bodo-Garo subgroups. Although it has been generally acknowledged that Manipuri does not readily fit into any of these subgroups (along with Mikir and Mru), the traditional classifications put Manipuri in the Kuki-Chin-Naga subgroup. However, within Kuki-Chin-Naga, Manipuri is classified as a distinct group on its own (Grierson, 1903) under the heading *Meithei*, on the basis of the facts that it was already a major literary language of the Kuki-Chin-Naga group and that it had characteristics that differentiated it from both the Kuki-Chin languages proper as well as the Naga languages. There is still a need of collection of more data from other languages to determine the exact position of Manipuri within Kamarupan. Although Manipuri native speakers mostly reside in the state of Manipur, there are native speakers in the neighbouring Northeastern states of India, notably in Assam, Tripura, Nagaland, and West Bengal. In India, the total number of people who returned Manipuri as their mother tongue numbers 1,270,216 out of which 1, 110, 134 speakers reside in Manipur (Census of India, 1991).

2.2.3 Manipuri Sounds

The inventory phonemes of Manipuri vary from author to author of Manipuri Grammars, for instance, (Thoudam, 1980), (Chelliah, 1994), (Bhat, 1997), (Singh Ch, 2000), (Singh, I., 2002), etc. It is clear that there are some disagreements among the linguists regarding the number of Manipuri phonemes. It is observed that the affricate sounds are not included by the above authors except by (Chelliah, 1994) and the symbols used are based on old IPA (International Phonetic Alphabet) or some other systems. Accordingly, some controversies have been encountered, as the transcription no longer corresponds to any of those found in major dictionaries. The modern dictionaries have adopted the new IPA symbols. At least a movement towards the using of a standard transcription for Manipuri sound is highly essential. However, it can be resolved to a more relevant one that Manipuri has 38 phonemes in all 24 consonants, 12 vowels (6 monophthongs and 6 diphthongs), and 2 tones.

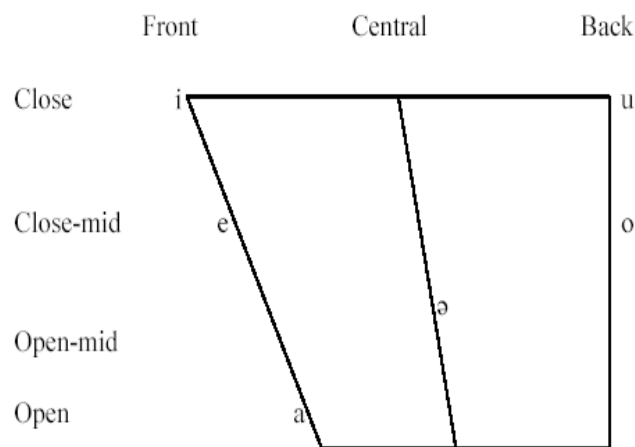## 2.2.3.1 Vowels Phonemes of Manipuri

2.2.3.1.1 Monophthongs of Manipuri

Front   Central   Back

Close   i   u

Close-mid   e   o

                                    ə

Open-mid

Open   a

Figure 5: Chart of Monophthongs of Manipuri

2.2.3.1.2 Diphthongs of Manipuri

Front   Central   Back

Close   ui

                          əi   oi

Close-mid

            ai   əu

                          au

Open-mid

Open
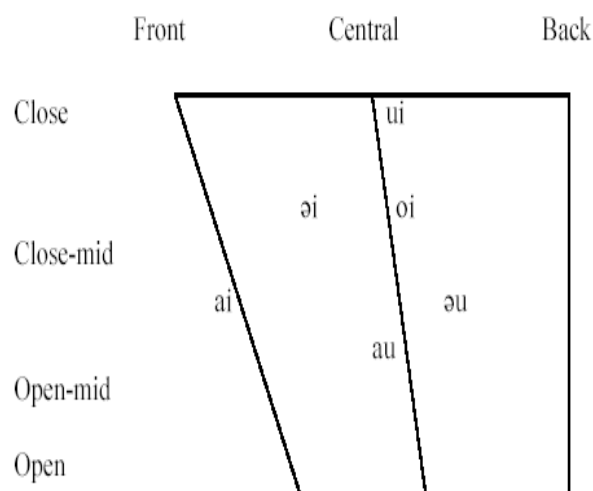
Figure 6: Chart of Diphthongs of Manipuri

2.2.4 Manipuri Script

Scripts are the latest development of human civilization; it is to substitute the oral language for the record, for the generations to come. It is said that the script is a symbol with a definite shape and significance, indicating a single sound or combination of sounds and providing a means through grouping for the visible expression of words,

i.e., of thoughts (Gudy, 1963). Manipuri script is known as Meetei Mayek. The Meetei Mayek recognized by the Government of Manipur and introduced since 2006 in the school is commonly known as Meetei Mayek of 27. Regarding the naming of letters up to the 18th letter it is taken from the body parts while from the 19th to the 27th letter, the naming of the letters have no sense; that is, they are borrowed from Hindi or Bengali. The grammars of this script are given below.

1. In 27 letters there are three vowels /a/, /e/ and /u/; Tibetan has 30 letters including one vowel /a/. But in Hindi and Bengali vowels and consonants are kept separately.

2. It has nine rows of three columns. Tibetan has four columns while Devanagari has five columns of nine rows.

3. The sequence/arrangement of Meetei Mayek is quite different from Devanagari, Tibetan, etc. The sequence/arrangement of the letters (of Devnagari/Tibetan) is according to the manner of articulation as well as place of articulation. But in Meetei Mayek, this is not the rule; it starts from the top to bottom of the body part, for instance. The Script used in Manipuri language is listing in a figure.

Figure 7: Manipuri Script and Characters

2.2.5 Cluster

Manipuri language has cluster in the initial and medial but not in the final (which is the feature of Tibeto-Burman language). The system of cluster, overtly presentation in Meetei Mayek, is simply made by underscore (-) of the two, which are supposed to be made a consonant cluster. This style of making consonant cluster is totally different from Devanagari. Meetei Mayek has not conjunct system but Devanagari has the conjunct system.

Example: ꯗꯨꯟꯕꯤ

2.2.6 Evolution of Meetei Mayek

Language is a product of human evolution: it is the result of full development of vocal organs. Writing/scripts on the other hand is the latest product of human civilization; it is a substitute of the oral language, for records of generations to come. In the history of writing /scripts there are four places in the world, namely Mesopotamia (Cueniform), Egypt (Hieroglyphic), China (Chinese) and India (Brahmi) etc. from where writing starts and this (start of writing from various places) refutes the monogenetic theory of writing. The Chinese writing system has an uninterrupted history that goes back more than 3500 B.C. (Fromlein, 2003). It is said that Chinese characteristic, like Sumerian signs, grew out of drawings of natural objects (Coulmas, 2003). But, according to Coulmas, Brahmi has two major design features: a) independent or initial vowel signs and b) diacritic vowel indication in post-consonantal position.

Meetei Mayek has the feature of phonetic square shape character. The first stone inscription in Meetei Mayek was installed by Kyamba, the Meetei King (1467-1508) at Khoibu Village in the South-East Manipur, and the writing of Cheitharol Kumbaba (Royal chronicle) also commenced during his time. The British scholar like Damant (1875) and Hodson (1875) pointed out that the Meetei script had been developed as late as 16/17th century. In course of time, King Khagemba (1597-1652) introduced the state sponsored Meetei Mayek for general use in 1615 A.D. In the beginning there were only 18 letters. During the time of Pamheiba (1709- 1748) five voiced consonants /b, d, g, j, r/ were added. Then in course of time, aspirated voiced consonants /jh, dh, bh, gh/ were again added.

2.2.7 Vowels and Consonants

Meetei Mayek has three vowel graphemes /a/, /e/ and /u/ which can occur initially (without any change of form) and which are included in the 27 Meetei Mayek. The other three vowels are made from the vowel /a/ with diacritic marks.

Out of 24 independent consonants, seven consonants have corresponding lonsum forms (unreleased form) which create distinction from the rest of the Indian scripts (Sharma, 2007), the seven lonsum consonants (ꯛ꯭ ꯇ꯭ ꯟ꯭ ꯝ꯭ ꯕ꯭ ꯜ꯭ and ꯡ꯭) which have a different form (a corresponding form): they are the unreleased ones which make a distinction from released ones. The use of lonsum forms make it easy to read, and also reduces ambiguity.

2.3 English and Manipuri Sounds

English has 22 vowels (14 monophthongs + 8 diphthongs) (Hornby, 2000) however Manipuri has only 12 vowels (6 monophthongs + 6 diphthongs) (Singh Ch, 2000). These absent vowels are substituted by the near vowel sounds of Manipuri that are in stock. Such vowels are troublesome both at the production as well as perception levels. The vowel sounds common to English and Manipuri like /i, e, a, u, æ,/ (/a/ in first member of English diphthongs /au/ and /au/) have seemed to pose no problem in production. Both languages have 24 consonants each, however the types of consonants are different. Due to this difference, Manipuri speakers will face difficulty in pronouncing some of the English consonant sounds that are not present in Manipuri. In Manipuri, clusters can occur only in the initial position of a syllable with two member consonants. For example, the cluster [ꯛ꯭ꯠ] and [ꯛ꯭ꯁ] in the words contract, contrast expert extrinsic etc. occurs in a syllable. It is a fact that many of the English linguists have absolutely neglected the medial clusters in their studies (Crystal, 1985), (O'Connor, 1980), and (Cruttenden, 1994). All final clusters of English are difficult to pronounce for Manipuri speakers since Manipuri has no final clusters at all. Unlike in English, Manipuri has weak stress. Manipuri speakers do not pay much attention in pronouncing the English words with stress. One reason may be due to the importance of tone in the language rather than stress. Manipuri language has yet to be studied from the point of view of modern linguistics. However, some work has started for a

systematic study of the language. For English phonemes, **"Oxford Advanced Learner's Dictionary of Current English"** (OALD) (6th edition, 2000) is taken as a reference.

2.4 English Language

The history of the English language really started with the arrival of three Germanic tribes who invaded Britain during the 5th century AD. These tribes, the Angles, the Saxons and the Jutes, crossed the North Sea, from what today is Denmark, and northern Germany. At that time the inhabitants of Britain spoke a Celtic language. But most of the Celtic speakers were pushed west and north by the invaders - mainly into what is now Wales, Scotland and Ireland. The Angles came from "Englaland" [sic] and their language was called "Englisc" from which the words "England" and "English" are derived.

From the 16th century the British had contact with many peoples from around the world. This, and the Renaissance of Classical learning, meant that many new words and phrases entered the language. The invention of printing also meant that there was now a common language in print. Books became cheaper and more people learnt to read. Printing also brought standardization to English. Spelling and grammar became fixed, and the dialect of London, where most publishing houses were, became the standard. In 1604 the first English dictionary was published.

2.4.1 Phonology of English

Phonology or sound system of English differs between dialects. The description below is most closely applicable to the standard variables known as Received Pronunciation (RP) and General American.

Table 1: Consonant Phonemes

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Nasal	m			n			ŋ	
Plosive	p b			t d			k g	
Affricate					tʃ dʒ			
Fricative		f v	θ ð	s z	ʃ ʒ		(x)	h
Approximant (Lateral)				r		j	w	
				l				

2.5 Hindi Language

Hindi, or more precisely Modern Standard Hindi, is a standardized and Sanskritised register of the Hindustani language (Hindi-Urdu). Hindustani is the native language of people living in Delhi, Haryana, Western Uttar Pradesh, Bihar, northeastern Madhya Pradesh, and parts of eastern Rajasthan, (Keith Brown, 2005) and Hindi is one of the official languages of India. Colloquial Hindi is mutually intelligible with another register of Hindustani, (Modern Standard) Urdu, which is associated with the Muslim religion. The two varieties of Hindustani are nearly identical in basic structure and grammar, and at a colloquial level also in vocabulary and phonology. Mutual intelligibility decreases in literary and specialized contexts, which rely on educated vocabulary drawn from different sources; Hindi drawing its specialized vocabulary from Sanskrit, whilst Urdu doing so from Persian and Arabic.

In the 2001 Indian census, 258 million people in India reported Hindi to be their native language; (Nigam, Late V.N., 1997) as of 2009, the best figure Ethnologue could find for speakers of actual Hindustani Hindi (effectively Khariboli dialect less Urdu) in 1991, was a figure of 180 million. (Hindi at Ethnologue 16th ed., 2009). This makes Hindi approximately the sixth-largest language in the world

Table 2: Hindi Primary, Secondary and Nasal

	Primary		Secondary		Nasal			
Varg 1	क	ख	ग	घ	ङ			
	ka	kha	ga	gha	ṅa			
Varg 2	च	छ	ज	झ	ञ			
	ca	cha	ja	jha	ña			
Varg 3	ट	ठ	ड	ढ	ण			
	ṭa	ṭha	ḍa	ḍha	ṇa			
Varg 4	त	थ	द	ध	न			
	ṭa	ṭha	ḍa	ḍha	ṇa			
Varg 5	प	फ	ब	भ	म			
	pa	pha	ba	bha	ma			
non-Varg								
	य	र	ल	व	श	ष	स	ह
	ya	ra	la	va	śa	ṣa	sa	ha

Note that the consonants श (śa) ष (ṣa) are pronounced identically today.

After independence, the Government of India started to standardize Hindi as a separate language from Urdu, instituting the following conventions: [original research?]

1. Standardization of grammar: In 1954, the Government of India set up a committee to prepare a grammar of Hindi; the committee's report was released in 1958 as "A Basic Grammar of Modern Hindi"

2. Standardization of the orthography, using the Devanagari script, by the Central Hindi Directorate of the Ministry of Education and Culture to bring about uniformity in writing, to improve the shape of some Devanagari characters, and introducing diacritics to express sounds from other languages.

The Constituent Assembly adopted Hindi as the Official Language of the Union on 14 September 1949. Hence it is celebrated as Hindi Day.

2.6 Dictionaries Available in Manipuri Language (Bengali script)

There have been a long gap of almost ten decades during which no effort was made to compile any dictionary involving Manipuri. After a century, in 1957, Dwijamani Dev Sharma compiled a bilingual dictionary **"The Anglo-Manipuri dictionary."** He was the first Indian as well as a Manipuri speaker to compile such a Manipuri involving dictionary.

In 1908, T.C. Hudson published the monograph **"The Meitheis."** The book devoted 25 pages to archaic Manipuri words translating into modern Manipuri and English. In the section (v) of this book contains some words on Manipur, Tibetan, Burmese, Bodo, Mao Naga, Kachin, Thado, Lushei, Rangkhol, Khami, and their English equivalents.

In 1921, William Pettigrew published **"Manipuri (Meitei) Grammar with illustrative Sentences."** In this grammar Book all the Manipuri, words and sentences have been given English equivalents.

T. C. Das, an Indian anthropologist published the monograph "**The Purums (an old Kuki Tribe of Manipur)"** in 1935. In proper sense, this book is not a dictionary. However, the author has given a list of Manipuri words with their English equivalents, in the appendix of the book.

The year 1957 is one of the most important milestones in the history of compilation of Manipuri dictionary. Dwijamani Dev Sharma, a Manipuri, the first Indian lexicographer compiled **"The Anglo-Manipuri Dictionary"** in this year. In this dictionary, English is the source language and Manipuri the target one. It has given grammatical information of the English word and pronunciation of the head entries. It has about 23, 000 head entries and covered 143 pages.

In 1960, Nameirakpam Denachandra Singh compiled **"Khunung Longi Artha"** (A dictionary of archaic words). It is the first Manipuri monolingual dictionary so far published. The dictionary consists of 143 pages and 2,145 head entries. The definitions of archaic/old words of Manipuri have been rendered into modern Manipuri.

1962, there were three dictionaries published in Manipur- 1 Trilingual and 2 bilingual. Dwijamani Dev Sharma compiled the trilingual dictionary **"Hindi, Manipuri and English Dictionary."** Hindi is the source language and Manipuri and English are Target languages. The provided grammatical information provided is poor. It has 803 pages and 25,600 head entries approximately.

The bilingual dictionary produced in this year was **"Friends English to Manipuri Dictionary"** by R.K. Shitaljit. It has about 35,000 head entries in English and covers 1,060 pages. The dictionary has given grammatical information and pronunciation of the entry words only. This is the largest bilingual dictionary involving Manipuri ever produced.

Another bilingual dictionary of the year 1962 was **"Hindi-Manipuri Shabdakosh"** (a dictionary of Hindi to Manipuri) by Shri Radhamohon Sharma and Narayan Sharma. It covers 695 pages and 23, 5000 head entries approximately in Hindi. The dictionary provides the grammatical information of the entry words.

In 1963, L. Narayan Sharma compiled **"Manipuri-Hindi Shabdakosh (Manipuri Longei)"** (a Manipuri to Hindi dictionary). It has about 11,000 head entries in Manipuri and covers 797 pages. This is the first and largest bilingual dictionary keeping Manipuri as source language.

D.M. Dev Sarma compiled **"A dictionary of English Idioms and Phrases"** in year 1963. It contains about 3,300 English idioms and phrases and head entries and covers 210 pages. The dictionary gives the Manipuri equivalents of English entries in a careful manner.

In 1964, Ningthoukhongjam Khelchandra Singh compiled **"Manipuri to Manipuri and English dictionary."** It has 657 pages and the number of head entries in Manipuri is 19, 7000 approximately. The dictionary provides the grammatical information and the pronunciation of the entry words. It is very interesting to note that the dictionary gives the spelling system/rule of Manipuri with Bengali script in the front matter.

In 1965, N.S. and B.S. compiled **"Standard Pocket Dictionary (Anglo-Manipuri-Hindi)"** (a triangular dictionary of English, Manipuri and Hindi). It has about 11,000 English head entries and covers 520 pages. In this dictionary, Manipuri and Hindi are the target languages. It provides grammatical information of English entry words.

Ch. Pishak Singh compiled **"A Manual of Anglo-Manipuri Dictionary of Idioms"** in year 1965. The dictionary also provides some French and Latin idioms. It gives Manipuri equivalent for each entry. The total number of idioms entered is 1,600. The dictionary covers 238 pages.

In 1966, R. K. Shitaljit again compiled a dictionary entitled **"Friends" Pocket dictionary."** It is a bilingual dictionary of English (source) and Manipuri (target). It provides the grammatical information of the source language. The dictionary provides the pronunciation of the entry words in a casual manner. It has about 20, 500 entries and covers 1, 018 pages.

In 1967, Shri O. Iboyaima Singh compiled **"Students' English word-Book (Book-one)".** This wordbook deals with two languages: Manipuri (Source) and English (Target). It contains about 2500 head entries under 50 headings and covers 120 pages. The pronunciations of English words are given by using Bengali script.

In 1973, Shitaljit compiled **"Beginners word-Book."** This wordbook deals with two languages: Manipuri and English. It has2, 000 entries in Manipuri under different heading:

1. Parts of Body,
2. Human being,
3. Human Relationship,
4. Student Requisitions,
5. Household articles,
6. Dress,
7. Pronouns,
8. Interrogatives pronouns,
9. Adjectives,
10. Animals,
11. Parts of animal Body,
12. Food,
13. Birds,
14. Flowers,
15. Professionals,
16. Tools,
17. Weapons,
18. Kings, etc.,
19. Ornaments,
20. Conveyances, etc.,
21. Natural Objects,
22. House and parts,
23. Minerals,
24. Solar system,
25. Reptiles and Insects,
26. Seasons,
27. Directions,
28. Days,
29. English Months,
30. Time,
31. Parts of Life-Time,
32. Trees,
33. Diseases,
34. Numbers,

35. Ordinal Numerals

36. Spices,

37. Military works,

38. Some verbs,

39. Verbs with past forms,

40. Adverbs and

41. Preposition.

This workbook has 92 pages, which provide some information on pronunciation on English terms.

In 1975, Phalendra Singh compiled a Manipuri monolingual dictionary **"Manipuri Longei (ashamba Sharuk)"** (Manipuri dictionary; a brief edition). It is the only monolingual dictionary for modern Manipuri written, using in Bengali script, so far published. It has about 3200 entry words and covers 107 pages. It provides the grammatical information of the headwords.

In 1977, Jadumani Singh compiled **"Hindi to Manipuri dictionary"**. It has 20 pages and 6,500 entry words. In this dictionary, Hindi is source and Manipuri the target language.

1978, Ningthoukhongjam Khelchandra Singh compiled **"Ariba Manipuri Longei"** (a dictionary of Manipuri archaic words). It has about 6,900 entries in archaic/old Manipuri words and covers 247 pages. All the head entries have been rendered into modern Manipuri.

In 1980, Mani Mairenbam compiled **"Literary Termshingi Manipuri Glossary"** (a Manipuri glossary of literary terms). It is bilingual glossary of English and Manipuri. It contains 165 literary terms in English and covers 167 pages. The terms have carefully been explained in Manipuri.

In 1983, Krishan Murari Mittal published a trilingual dictionary **"A Dictionary in English, Bengali and Manipuri."** English is the source language and Bengali and Manipuri are the target languages. It has about 14, 000 head entries and 341 pages. No compiler's name is mentioned in the dictionary since this dictionary is not different from Gordon: 1937.

L. Jnendra Singh compiled "**Manipuri Glossary of Political Terms**" in the year 1983. It has 500 political terms in English along with a careful explanation in
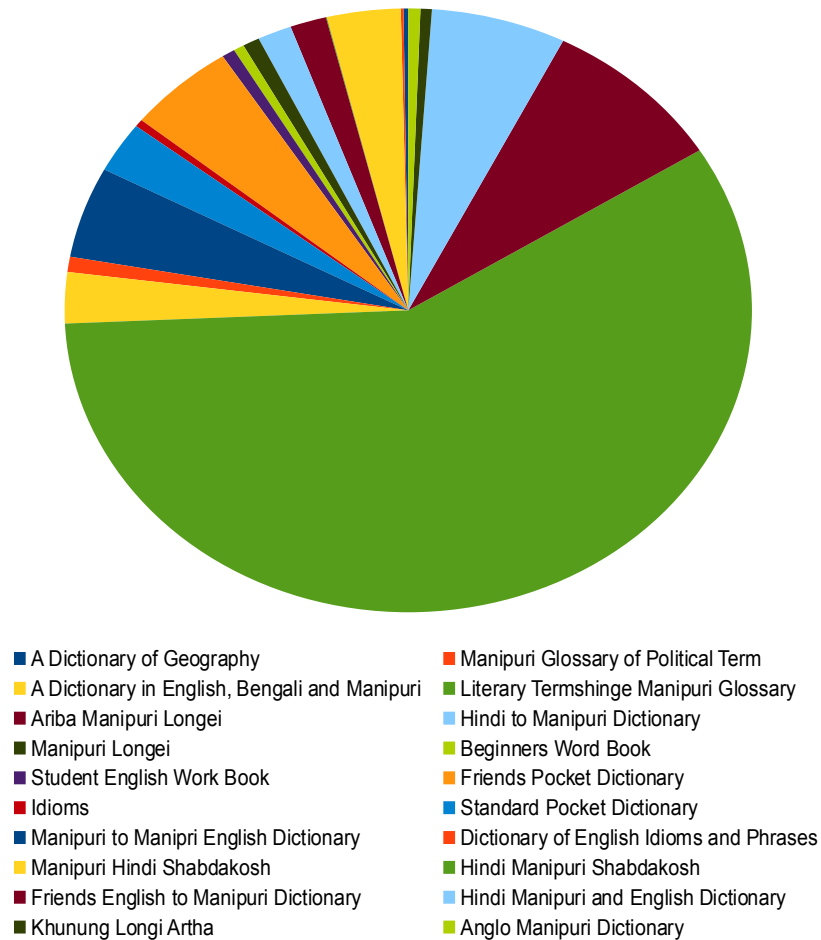
Manipuri. The glossary covers only 226 pages. It is a subject dictionary for political science students and teachers.

1984, Leishangthem Ajit Singh complied **"A Dictionary of Geography."** It has 900 geographical terms in English and explained in details.

Table 3: List of Manipuri Dictionary in Hard Copy

Dictionaries	No of Words Entry
"A Dictionary of Geography"	900
"Manipuri Glossary of Political Term"	500
"A Dictionary in English, Bengali and Manipuri"	1400
"Literary Termshinge Manipuri Glossary"	165
"Ariba Manipuri Longei"	6900
"Hindi to Manipuri Dictionary"	6500
"Manipuri Longei"	3200
"Beginners Word Book"	2000
"Student English Work Book"	2500
"Friends Pocket Dictionary"	20500
"Idioms"	1600
"Standard Pocket Dictionary"	11000
"Manipuri to Manipuri English Dictionary"	19700
"Dictionary of English Idioms and Phrases"	3300
"Manipuri Hindi Shabdakosh"	11000
"Hindi Manipuri Shabdakosh"	235000
"Friends English to Manipuri Dictionary"	35000
"Hindi Manipuri and English Dictionary"	25600
"Khunung Longi Artha"	2145
"Anglo Manipuri Dictionary"	2300

2.6.1 Graphical Representation of Manipuri Printed Dictionaries

■ A Dictionary of Geography		■ Manipuri Glossary of Political Term	
■ A Dictionary in English, Bengali and Manipuri		■ Literary Termshinge Manipuri Glossary	
■ Ariba Manipuri Longei		■ Hindi to Manipuri Dictionary	
■ Manipuri Longei		■ Beginners Word Book	
■ Student English Work Book		■ Friends Pocket Dictionary	
■ Idioms		■ Standard Pocket Dictionary	
■ Manipuri to Manipri English Dictionary		■ Dictionary of English Idioms and Phrases	
■ Manipuri Hindi Shabdakosh		■ Hindi Manipuri Shabdakosh	
■ Friends English to Manipuri Dictionary		■ Hindi Manipuri and English Dictionary	
■ Khunung Longi Artha		■ Anglo Manipuri Dictionary	

Figure 8: Graphical representation of Manipuri Dictionaries words and Publisher.

2.7 Hindi Dictionaries

❖ English to Hindi dictionary (शब्दकोश)

❖ Shirpa Dictionary

❖ Freelang Hindi-English dictionary

❖ Hindkhoj (www.hindkhoj.com)

❖ www.bab. la (multilingual)

2.8 Major English Dictionaries

1. A Dictionary of English Language by Samuel Johnson.

2. The American Heritage Dictionary Of English   Language.

3. Blacks Law Dictionary, A Law Dictionary.

4. Brewers Dictionary Of Phrase And Fable.

5. Chambers Dictionary.

6. Canadian Oxford Dictionary.

7. The Century Dictionary.

8. Concise Oxford Dictionary.

9. HarperCollins.

10. Longman Dictionary Of Contempory English.

11. Macquarie Dictionary, A Dictionary of Australian English.

12. New Oxford American Dictionary.

13. New Oxford Dictionary Of English.

14. Oxford English Dictionary (Descriptive).

15. The Penguin English Dictionary.

16. Random House Dictionary Of The English Language.

17. Merriam-Webster.

18. Naoh Webster's An American Dictionary Of The English Language.

19. Webster New World Dictionary

2.9 Multilingual Dictionaries

Available multilingual dictionaries on different domains on web are given in the table as per investigation.

Table 4: Available Multilingual Dictionaries and its Link

Sl. No.	Names	Links
1	MULTI eurodicautom	http://eurodic.ip.lu/cgibin/edicbin/EuroDicWWW.pl
2	IMF Terminology Database	http://tradition.axone.ch http://www.imf.org/external/np/term/index.asp
3	MULTI Foreign Trade	http://www.sice.oas.org/GLOSSARY/Glossary.asp
4	Trilingual "Dictionary of Health Finance"	http://www.hurisc.org/bkkwort/index.htm
5	MULTI European Union reference texts	http://europa.eu.int/
6	MULTI EU glossary & terminology	http://europa.eu.int/scadplus/leg/en/cig/g4000.htm http://europa.eu.int/geninfo/query_it.htm
7	Multilanguage Glossary about Computer and Internet terms	http://www.learnthenet.com/German/index.html
8	MULTI financial terminology database	http://tradition.axone.ch/
9	MULTI Dictionary of nature	http://www.anaconda-2.net/dicos/french.html
10	MULTI Web Search Alliance Directory	http://fossick.com/index.htm
11	MULTI legal glossaries	http://www.geocities.com/CapitolHill/2764/jurid.html
12	MULTI medical terms	http://allserv.rug.ac.be/~rvdstich/eugloss/language.html
13	Medical terms	http://home.ipoline.com/~guoli/engchn/0begin.htm
14	MULTI dictionary portal	http://www.emich.edu/~linguist/dictionaries.html
15	MULTI automotive	http://www.usautoteile.com/automati.htm
16	MULTI Birds name translation	http://www.mumm.ac.be/~serge/birds/home_fr.html
17	Berber glossary	http://perso.club-internet.fr/tilit/lexiquetamazirtfrancais.html
18	MULTI bibliographic terms glossary	http://www.mun.ca/library/cat/lang/biblang.html
19	MULTI Film dictionary	http://userpage.fu-berlin.de/~oheiabbd/md_category_e.html
20	MULTI chemical substances /international chemical safety cards	http://www.cdc.gov/niosh/ipcs/icstart.html
21	MULTI ISI Statistics Glossary	http://europa.eu.int/en/comm/eurostat/research/isi/alpha/en/en_list.htm

2.10 Manipuri Language Technology

In technological language front, Manipuri is just starting. Further, on a trial basis electronic dictionary was also completed. If all these steps are completed the people of India in general, and Manipuri and Tribal languages of Manipuri users in particular can enhance their quality of life by using information technology through Indian languages, and can also make available in electronic medium, resource information in Indian languages in a manner relevant to the present day needs.

With the advancement of computer science in many parts of the globe, there is its effect on Manipuri language also. In 2002 Development of Manipuri Corpora sponsored by C-DAC was started in the Department of Linguistics Manipur University. In 2008 April, Language Data Consortium for India Languages (LDC-IL), Central Institute of India languages (CIIIL), Mysore had taken up steps for data development of Manipuri language and still it is still continuing. There is great achievement in annotation, tagging, Part of speech analysis, etc. and the work is going on along with data collection. Experiments on Manipuri e-Dictionary was done in Computer science Department, Manipur University. The phase I of Development of WordNet for North East languages (Assamese, Bodo, Manipuri and Nepali) sponsored by DIT has been completed. In these projects three things have been done: giving concepts, examples and making synsets. Here Hindi is the source language. Two projects sponsored by DIT are going on (since 2012 April) in Linguistics Department. One is Shallow Parser Tools for Indian Languages (Morphological analyzer) and another is Indian Languages Corpora Initiative (ILCI) for Manipuri language. These are all for machine Translation.

2.11 Conclusion

The Chapter have discusses about the existing dictionaries of Manipuri, which are available in Hard copies or printed copies, and number of word entries using the Bengali Scripts, which are not in Machine-readable format or not in electronic format. Also analyses of Dictionary available in monolingual, bilingual and multilingual, which is not in Meitei script, analyze the word entry of Dictionary, the features of Dictionary, characteristics of Dictionary, Basic elements of Dictionary and about the Language used to include in MMD that are Hindi, English and Manipuri. After studying all those entries and features in all kinds of dictionaries, MMD decided to enter as much as

possible from the existing ones. Lastly, the chapter discusses about the development in Manipuri Language Technology, which is a process of NLP, in the field of Manipuri language.