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INDIAN MULTILINGUALISM, LANGUAGE POLICY AND THE DIGITAL DIVIDE

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ABSTRACT

India has many divides revolving around ethnicity, language, religion, region, social identity, rural/urban, literate/illiterate, etc. Majority of her population lives in the rural areas. The rate of literacy for the entire country in 2001 was 65.2 %, with the highest literacy in Kerala above 90%, lowest literacy in Bihar less than 50%, rural literacy at 59%, urban 80%, males 76%, and females at 54%.

This position paper on Indian Languages and the Digital Divide, illustrates and describes the multilingual nature of Modern India, the challenges it has faced in language planning since independence from the British rule, and the challenges to the maintenance of language vitality in the context of digital divide, and the path ahead to bridge the divide.

Argues that information technology is a tool for empowering all the Indian languages and their speakers, but the localization of software is only a small part of this process of empowerment. Also recognizes the current uneven progress in the development of software in Indian languages as reality for future too.

1.0. INDIAN MULTILINGUALISM

Modern India, as per the 1961 count, has more than 1652 mother tongues, genetically belonging to five different language families. Apart from them 527 mother tongues were considered unclassifiable at that time. The 1991 Census had 10,400 raw returns and they were rationalized into 1576 mother tongues. They are further rationalized into 216 mother tongues, and grouped under 114 languages: Austro-Asiatic (14 languages, with a total population of 1.13%), Dravidian (17 languages, with a total population of 22.53%), Indo-European (Indo-Aryan, 19 languages, with a total population of 75.28%, and Germanic, 1 language, with a total population of 0.02%), Semito-Harmitic (1 language, with a total population of 0.01%), and Tibeto-Burman (62 languages with a total population of 0.97%). It may be noted that mother tongues having a population of less than 10000 on all India basis or not possible to identify on the basis of available linguistic information have gone under 'others'. So, good number of "languages" recorded in the Indian Census could not be classified as to their genetic relation, and so are treated as Unclassified Languages. The Indo-Aryan languages are spoken by the maximum number of speakers, followed in the descending order by the Dravidian, Austro-Asiatic, and Sino-Tibetan (Tibeto-Burman) languages. Eighteen Indian languages : Assamese, Bengali, Gujarati, Hindi, Kashmiri, Kannada, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, and Urdu are spoken by 96.29% of the population of the country and the remaining 3.71% of the population speak rest of the languages.

The concerns of the Indian languages during the 21st century are different from those of post-independence 20th century. The analyses of Indian multilingualism during the 19th and 20th centuries looked at it as a “problem” and tried to overcome this “problem.” But, in the present century, because of the systematic language policy initiatives of the past half a century (that I am going to elucidate in the next section), we have begun to look at multilingualism as an asset, consider it as a “resource” and try to make use of this “resource” for language and social development. This shift in the paradigm is due to a number of inter-connected factors which are socio political, economical and even psychological not only for language but also for social development.

Indian multilingualism is unique in several ways, including the massive number of people involved in the use of multilingualism. The following are some of the important characteristics, besides the large number of people who practice multilingualism.

1.1. Multilingualism – States and Union Territories

India is divided into 24 States and 8 Union Territories as units of administration. Originally such territorial divisions into provinces or states were done mostly for administrative convenience during the British rule. Presidencies, states, or provinces came into being even as more territories were acquired by the British through various means and added to British India. As a result, the borders of such provinces cut across ethnic, religious, social, and linguistic lines. Even with the linguistic re-organization of the Indian provinces after the independence, most states remained multilingual as ever. However, in each of these linguistically re-organized states, there is at least one dominant majority linguistic group, often more than fifty percent of the total population of that state.

The table given below gives the percentage of majority language speakers in each Indian state and union territory according to the 1991 Census (Note that this refers to the number of states and union territories as on that date).

STATES

| State/Union Territory | Majority language & % of its speakers | Percentage of speakers of minority languages |
|-----------------------|---------------------------------------|--|
| Andhra Pradesh | Telugu | 85.13 |
| Arunachal Pradesh | Nissi/Dafla | 23.40 |
| Assam | Assamese | 60.89 |
| Bihar | Hindi | 80.17 |
| Goa | Konkani | 56.65 |
| Gujarat | Gujarati | 90.73 |
| Haryana | Hindi | 88.77 |
| Himachal Pradesh | Hindi | 88.95 |
| Jammu & Kashmir | Kashmiri | 52.73 |
| Karnataka | Kannada | 65.69 |
| Kerala | Malayalam | 95.99 |
| Madhya Pradesh | Hindi | 84.37 |
| Maharashtra | Marathi | 73.62 |
| Manipur | Manipuri/Meitei | 62.36 |
| Meghalaya | Khasi | 47.45 |
| Mizoram | Mizo/Lushai | 77.58 |
| Nagaland | Ao | 13.93 |
| Orissa | Oriya | 82.23 |
| Punjab | Punjabi | 84.88 |
| Rajasthan | Hindi | 89.89 |
| Sikkim | Nepali | 60.97 |

| | | | |
|---------------------------|---------------|-------|-------|
| Tamil Nadu | Tamil | 85.35 | 14.65 |
| Tripura | Bengali | 69.59 | 30.41 |
| Uttar Pradesh | Hindi | 89.68 | 10.32 |
| West Bengal | Bengali | 86.34 | 13.66 |
| UNION TERRITORIES | | | |
| Andaman & Nicobar Islands | Bengali | 24.68 | 75.32 |
| Chandigarh | Hindi | 55.11 | 44.89 |
| Dadra & Nagar Haveli | Bhili/Bhilodi | 68.69 | 31.31 |
| Daman & Diu | Gujarati | 21.91 | 78.09 |
| Delhi | Hindi | 81.64 | 18.36 |
| Lakshadweep | Malayalam | 84.51 | 15.49 |
| Pondicherry | Tamil | 89.18 | 10.82 |

Not only India as a whole is multilingual but also each State and Union Territory within India is equally multilingual. **Linguistically India is made of many mini-Indias.**

The number of multilingual population is also remarkable. They constitute 19.44% of the total population in India. The traditionally strong constituent of multilingual groups is further strengthened in modern times from one decade to another, as mobility within the country as well as the introduction of formal education in all parts of the country that insists on learning at least two languages until the end of high or higher secondary education. Although Kerala appears to be the most cohesive linguistic state with a single language, Malayalam, claiming the mother tongue status for nearly 96 percent of its population, bilingualism among this mother tongue group is equally good.

1.2. Majority / Minority Language Relation

This “majority and minority language phenomenon” is only four and a half decades old. This is also the result of the creation of linguistic states, created to protect the interests of linguistic minorities and their languages. However, broadly there are two categories of minorities: some are both linguistic and religious minorities (Muslims are considered to be both religious and linguistic minorities.) and some others are only linguistic minorities. Even among these two categories of minority groups, some of the minority groups considered minority within a state or union territory may be a majority group in another state or union territory. Their mother tongues may function as a major language elsewhere in the country (for example, the Telugu speakers settled in Maharashtra are treated as a minority group in Maharashtra, but they are the majority group within Andhra Pradesh). There are also minority groups that are found only within a single state and thus always occupy a minority position (for example, Tulu speakers of Karnataka, whose native state is Karnataka).

Because of the creation of linguistic states, a new category of linguistic minorities is also being created in several states. Employment opportunities enable and encourage people to move from one linguistic state to another, especially towards the large industrialized cities such as Ahmedabad, Bombay, Calcutta, Bangalore, etc. And this migration results in the creation of newer linguistic minorities. For example, recent accretion to the Malayalam-speaking population already living in Bangalore has created a large Malayalam speaking linguistic minority in that city. This trend of people from one linguistic group moving to areas of another linguistic group is bound to increase because of industrialization and the guarantee of the freedom of mobility ensured in the Constitution of India. We see a large number of migrants to these states from other parts of the country

1.3. Scripts do not have Language Borders

Indian languages are written in more than 14 scripts. Normal convention regarding any script is that a language often uses the same single and specific script to render itself in the visual medium wherever it is spoken. For example, we all assume that the English language should be written with the normally accepted Roman script, and not in the Devanagari script. However, the pluralistic tradition of India has broken this kind of tradition for many centuries, and introduced the practice of using different scripts to write the same language and also using the same script to write different languages. This practice is not frowned upon, and it continues unabated. The Devanagari script is used to write several languages. Kannada script is used to write Kannada, Kodagu, Tulu, Banjari, Konkani, Sanskrit, etc. Sanskrit is written using the Devanagari, Kannada, Telugu, Tamil, Malayalam and many other scripts. Similarly Kashmiri is written using the Perso-Arabic, Sharada and Devanagari scripts. Sindhi in India is written both in the Perso-Arabic and Devanagari scripts. So, by tradition, script may not be a boundary wall between Indian languages.

Since Indian traditions greatly depended upon the oral transmission, and since there were certain barriers imposed in both secular and religious contexts restricting the imparting of education, the spread of literacy was rather sporadic in the past, and the need to reduce the emerging languages to writing was not achieved in several languages in the past. As a result, many potential languages remained as oral languages without developing scripts of their own. So, we have mass illiteracy to tackle and hundreds of languages and dialects waiting to get rendered in writing. In this context, gradually an unwritten convention was being developed since independence. Whenever an unwritten language was to be given a script, the Devanagari script was sought to be the first choice. If this was not acceptable or possible, the script of the dominant regional language of the state or union territory where the unwritten language was spoken, would be recommended. However, in practical circumstances such conventions are not really and fully practiced. Sometimes both conventions are adopted or else as in Nagaland Roman script is also used to write some tribal languages. Another example, Rabha language uses Assamese script in Assam, in Meghalaya Roman script, and in West Bengal the Bengali script.

Apart from these there are some of the minor scripts used in India (Singh K.S 1993). They are:

MINOR SCRIPT

| Sl.No. | Name of the Script | Name of the State/U.Ts. | Name of the communities |
|--------|--------------------|--|---|
| 1. | BAITAL NAGARI | Rajasthan | Jaga/Brahm Bhatt |
| 2. | BALTI | Jammu and Kashmir | Broq-pa |
| 3. | BODHI | Himachal Pradesh Jammu and Kashmir Sikkim | Beda, Bodh Bodh, Champa, Gara, Mon Bhotia |
| 4. | BURMESE | Tripura | Mag/Magh |
| 5. | HINGNA | Arunachal Pradesh | Khamba |
| 6. | MEITEI-MAYAK | Manipur | Meitei |
| 7. | MON | Arunachal Pradesh | Khampri |
| 8. | OL CHIKI | Bihar West Bengal | Santal Santal |
| 9. | TAKRI/TANKRI | Himachal Pradesh | Gaddi Rajput, Pajjara, Seok |
| 10. | TANA/THANA | Lakshadweep | Manikfan, Raveri, Thakru, Thakrufan |
| 11. | TIBETAN | Arunachal Pradesh Himachal Pradesh Sikkim West Bengal | But Monpa, Dirang, Monpa, Kalaktang Monpa, Monpa Lishpa, Zakhring/Meyor Khampa Bhotia, Lepcha Lepcha, Sherpa |

| | | | |
|-----|---------|-----------------------|---|
| 12. | U-CHHEN | Sikkim | Tebetan |
| 13. | U-MED | Sikkim West Bengal | Druk-pa/Dukpa, Tibetan Druk-pa/Dukpa |

1.4. Sharing of Linguistic Features Across Language Families

One of the major linguistic discoveries of the previous century relating to Indian languages is the identification of common linguistic features across language families. Among others, we may cite Bloch's article "India and South East Asia as a Linguistic Area," (Bloch 1934), and Emeneau's work "India as a Linguistic Area" (Emeneau 1956). This sharing of linguistic features by the languages across the language families was facilitated by their coexistence for centuries together, and also by the continuing interaction of the people who speak these languages on a day-to-day basis. While Sir William Jones' declaration in 1786 of the genetic relationship between Sanskrit and other Indo-European languages revolutionized the philological studies, the fact that Indian languages (those of the Indo-Aryan and the Dravidian families) have some fundamental similarities among them was known to the Indian grammarians for centuries. A nineteenth century missionary to India, Rev. William Campbell, built his ideas of language planning and development for Indian vernaculars on this assumption. Campbell wrote in 1839,

"Whatever may be the difference in the languages, they all belong to the same great family; similar laws regulate the idiom, construction, style, and various kinds of composition, which prevail in the dialects of the north and the south; when you describe one part of India, you have, in many respects, described the whole; the manners, the customs, and the habits of the people, with trifling variations, correspond from Cape Comorin to the Himalayas; and their superstition, in all its great lineaments, is exactly the same. Whether, therefore, their present literature was originally written in Sanscrit, or in some other languages, the Vedas, the Shasters, the Pooranas, and all their classical writings are to be found in all the principal tongues of India, and are as well understood in the one as in the other (Campbell 1839)

Some of the shared linguistic features across language families are as follows:

1. Presence of a series of retroflex consonants that contrast with dentals sounds.
2. Two to three degrees of 'you'.
3. Widespread lexical borrowing.
4. Presence of echo word constructions and onomatopoeic forms.
5. Reduplication process of different grammatical categories such as nouns, verbs, adjectives, adverbs, etc.
6. Compound verb forms.
7. Conjunctive particle.
8. Sentence structure – flexibility of word order though finite verb usually comes in the last position.

The geographic boundaries drawn on the basis of languages, or linguistic boundaries, or linguistic spread are recent phenomenon in some sense, and are of just about four and a half decades. We should also recognize that the linguistic consciousness and identities of a variety of major linguistic groups in the country was a cultural and cognitive reality, but not a political reality until the linguistic re-organization of the Indian states.

Another interesting aspect of this scenario is that the people, who live in villages and towns that lie in the political boundaries of two or more linguistically re-organized states, may continue to use the same grammar of their own language with different vocabularies drawn from another language of the border to communicate among themselves and with the groups across the border. Such examples are not restricted to so-called tribal areas such as the areas in and

around Bastar district, or in Manipur Hills, but are very common among the speakers of “cultivated or literary” languages such as Marathi, Telugu, Kannada, and Tamil, etc. Even with the wider reach and access of the audio and video media now, such behaviors across these boundaries may be obscured but not totally lost.

1.5. Sharing of Languages

For ages, India has been a multi/bilingual mosaic. References to the use of a variety of languages with their own phonological accent and grammatical inflections are found in such ancient texts as **Natya Sastra**, and **Manu Smriti**. Dialectical variations in the speech behavior of characters were ably exploited for various dramatic and aesthetic purposes by Kalidasa in his plays. Multilingualism in India has been so built that every language or dialect under the Indian sun always had some role to play. No doubt that many languages and dialects were despised and looked down upon for example consider the distinction between Deva Bhasha and Paishachik bhashas, and some were even banned and banished, but, somehow, bilingualism survived. People always had some pride in their own languages and dialects, and were ready to show their loyalty by assigning some roles or the other mostly central to their languages and dialects.

Wherever bilingualism has evolved in India, because of given socio-political and demographic reasons, it always has remained vibrant. People acquire bilingualism in these contexts from their early childhood. They do not have to go to school to learn to use two or more languages.

1.6. Recent Migrants

The attitude of the recent migrants, from one state to another, stands in contrast to that of the earlier migrants. The recent migrations take place under a different canvas. These migrants arrive as individuals or families, not as whole communities. These are more often job seekers, and perhaps would go back, or would like to go back to where they came from. They are aware of their linguistic rights enshrined in the Indian constitution. Means of communication between the migrant families or individuals and their original linguistic group are easily available. Reading materials are easy to get. Radio and TV programs are easy to access. Continuity is somehow ensured. With continuity come the linguistic and social identities. When some families settle down and take roots in a different linguistic environment, they still continue their language loyalties. The strong loyalty transfer that we notice in the populations that migrated a few centuries ago is conspicuous by its absence in the recent migrants.

1.7. Sponsored Bilingualism

Bilingualism relating to English is a different category altogether. It is a sponsored, institutional arrangement. It is driven by formal necessities, not an acquisition in early childhood. Perhaps this explains the ambivalent attitude of Indians in general to English. They seem to like it; they seem to want it as a part of their life and career, even as they declare it to be a “foreign” language. Many families in urban areas, however, want their children to acquire English as their “first” language. This trend is getting popular even in rural areas. (William Campbell, an ardent supporter of Indian vernaculars and a committed opponent of Macaulay’s Minute, actually foresaw this possibility clearly in his “prophetic” book **British India**, published in 1839. See chapters 26 and 27.) If this continues, say, for the next fifty years, we may see a different kind of bilingualism emerging in the country, one in which ethnic and religious identity may not play a crucial part.

Yet another sponsored bilingualism in the making relates to Hindi. There is bound to be some competition between Hindi and English to occupy the Indian bilingual space. It is hard to visualize the contours of this competition right now. But, if we go by the historically proven Indian mindset,

Indian socio-political conditions will evolve some functional separation between the two and keep both the languages within the bilingual space.

1. 8. A Century of Recorded Bilingualism

For more than one hundred years, the Census of India reports have been taking notice of the bilingual situation in India. Bilingualism is often taken as a given fact. Bilingualism is also used as a denominator of the movement of various populations from one region or province to another. Bilingualism figures are often used to make political claims and seek privileges in administration, education, mass communication, and other departments of public life in general. Educational policies of the states are guided by these figures. However, the quality of bilingualism or the level of bilingualism often remains unspecified in linguistic terms in these claims.

The way the details of bilingualism and tri-lingualism are arrived at, in surveys such as the Census enumerations, is also noteworthy. In the Census, names of two other languages known to the respondents in the order of proficiency are recorded. Here, the names of languages, other than the one recorded as the mother tongue, is elicited by asking the respondent about the other languages known to him or her. These may be Indian or foreign languages. If the respondent knows only one language, the name of that particular language only is recorded. If the respondent has knowledge of more than one language, the names of two languages in the order of proficiency, self-assessed by the respondent, are recorded. These two languages are recorded one after the other. Between these two languages, that language in which the respondent can, according to his claim, comprehend, speak and communicate is recorded first, and the other language as the second item. The individual need not know reading and writing in these languages. It is enough if he speaks and communicates in these two languages. However, the number of languages thus recorded will not exceed two.

Naturally evolved bilingualism coupled with bilingualism evolving through schooling has become a big language resource, and it is exploited mainly by the mass media for enhancing its reach across the population. What is needed is a more in depth linguistic study of bilingualism as a linguistic idea. While figures are very important, qualitative features of bilingualism as a linguistic idea yet to be studied.

Sharing of Languages - Speakers of Major Languages 1991 Census

| Sl. No | Languages | Total Number of speakers | Bilinguals | Trilinguals | % of Bilinguals | % of Trilinguals |
|--------|-----------|--------------------------|-------------|-------------|-----------------|------------------|
| 1 | Assamese | 130,79,696 | 19,78,990 | 16,71,331 | 15.1302 | 12.7780 |
| 2 | Bengali | 69,595,738 | 58,42,675 | 32,66,779 | 8.3951 | 4.6939 |
| 3 | Gujarati | 40,673,814 | 53,94,439 | 47,14,942 | 13.2626 | 11.5920 |
| 4 | Hindi | 337,272,114 | 2,70,74,421 | 1,00,65,191 | 8.0274 | 2.9842 |
| 5 | Kannada | 32,753,676 | 52,12,152 | 26,60,215 | 15.9131 | 8.1218 |
| 6 | Kashmiri | 56,693 | 15,246 | 18,751 | 26.8922 | 33.0746 |
| 7 | Konkani | 1,760,607 | 5,19,715 | 7,86,601 | 29.5190 | 44.6778 |
| 8 | Malayalam | 30,377,176 | 27,99,555 | 59,65,126 | 9.2159 | 19.6368 |
| 9 | Manipuri | 1,270,216 | 1,41,773 | 2,78,443 | 11.1613 | 21.9209 |
| 10 | Marathi | 62,481,681 | 92,05,446 | 79,70,448 | 14.7330 | 12.7564 |
| 11 | Nepali | 2,076,645 | 4,09,437 | 4,17,651 | 19.7162 | 20.1118 |
| 12 | Oriya | 28,061,313 | 18,94,755 | 25,79,154 | 6.7521 | 9.1911 |
| 13 | Punjabi | 23,378,744 | 34,00,361 | 54,12,133 | 14.5466 | 23.1498 |
| 14 | Sanskrit | 49,736 | 19,456 | 6,204 | 39.1185 | 12.4738 |
| 15 | Sindhi | 2,122,848 | 7,41,797 | 6,05,242 | 34.9434 | 28.5108 |
| 16 | Tamil | 53,006,368 | 87,86,309 | 11,44,532 | 16.5759 | 2.1592 |
| 17 | Telugu | 66,017,615 | 81,68,683 | 54,82,348 | 12.3734 | 8.3043 |

| | | | | | | |
|----|------|------------|-------------|-----------|---------|---------|
| 18 | Urdu | 43,406,932 | 1,12,25,024 | 52,67,456 | 25.8955 | 12.1350 |
|----|------|------------|-------------|-----------|---------|---------|

Sharing of languages by the minor language speakers is illustrated in Annexure I.

The number of bilinguals is on the increase from Census to Census. Their national average is: 1961- 9.70; 1971- 13.04%; 1981- 13.34%; 1991- 19.44%. Some of the important results of the multilingual picture of India emerging from the 1991 Census is that in case of major languages, 18.72% are bilinguals and 7.22% are trilinguals and the bilinguals among minor languages are 38.14% and the trilinguals are 8.28%.

Significantly among major language speakers, spread of bilingualism in English is more (than in Hindi) – 8% as second language, 3.15% as third language where as the same in Hindi is 6.15% and 2.16%.

2. 0. LANGUAGE POLICY

The Language Policy of India relating to the use of languages in administration, education, judiciary, legislature, mass communication, etc., is pluralistic in its scope. It is both language-development oriented and language-survival oriented. The policy is intended to encourage the citizens to use their mother tongue in certain delineated levels and domains through some gradual processes, but the stated goal of the policy is to help all languages to develop into fit vehicles of communication at their designated areas of use, irrespective of their nature or status like major, minor, or tribal languages. The policy is accommodative and ever-evolving, through mutual adjustment, consensus, and judicial processes. The accommodative spirit may be dim at times, and the decisions vacillating and fidgety, but this spirit was continuously prevalent from the early days of the struggle for independence from the British rule. This was seen as a necessity in nation-building. Political awareness or consciousness relating to the maintenance of native languages has been very high, both among the political leadership and among the ordinary people who speak these languages. The language policy of the country is elucidated in its Constitution, implemented through various executive orders that have been issued from time to time and the judicial pronouncements since 1950. These have directed the way the languages are used in various domains.

2. 1. Language Clustering

The Constitution of India listed fourteen languages Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marathi, Oriya, Punjabi, Sanskrit, Tamil, Telugu, and Urdu, into its Eighth Schedule in 1950. Since then, this has been expanded thrice, once to include Sindhi, another time to include Konkani, Manipuri and Nepali, just this month the third time to include Bodo, Santhali, Maithili and Dogri. The 100th Constitution Amendment which added four more languages – Bodo, Maithili, Santhali and Dogri into the Eighth Schedule was supported by all the 338 members present in the Parliament. It has been stated that the claims of 33 more languages for inclusion are under consideration. This list is open-ended and has become a tool to bargain and gain benefits for the languages. Once a language gets into this club, its nomenclature itself will change, status will change, and it will be called Modern Indian Language (MIL), Scheduled Language (SL), etc.

This Schedule has emerged as the most important language policy statement. It clusters thousands of written and unwritten languages and dialects into two broad categories of Scheduled and Non-Scheduled languages. Though historically, it is not possible to find any rationale to cluster the Indian languages into these categories, the languages of the Eighth Schedule are not normally treated on par with Non-Scheduled languages (Mallikarjun 1986). The languages of the Schedule have preferential treatment, and the languages listed in this schedule are considered first for any and almost every language development activity, and are bestowed with all facilities including facilities to absorb language technology initiatives of the government. It

is needless to mention that the Technology Development in Indian Languages (TDIL) did not, and under present circumstances would not percolate beyond these languages.

The second kind of clustering is at the level of mother tongues into “languages.” Though 114 languages are arrived at by the Census Office, many of these languages are not independent and individual entities as such. Within these, there are many mother tongues/languages/dialects. The group of “languages” is formed by clustering of the populations of many mother tongues under an umbrella called “language.” For example, Hindi is a cluster of more than 45 mother tongues, which include Awadhi, Banjari, Bhojpuri, Braj Bhasha, Bundelkhandi, Chambeali, Chattisgarhi, Garhwali, Haryanvi, Kangri, Kulvi, Labani, Magahi, Maithili, Marwari, Mewari, Pahari, Rajasthani, Sadri, Sugali, etc. The varieties of Hindis combined to form the Hindi of post-independence era helped in the unification of the Hindi-speaking population for demographic purposes (statistical majority), and not for the development of communicative pan-Indian Hindi as envisaged by the framers of the Constitution. Due to the expansion of media network in the past decade, pan-Indian Hindi is developing mainly through the audio-visual mass media. The Hindi thus developed has a greater impact on non-Hindi speaking states. This could lead to a position where pan-Indian Hindi assumes some of the functions of non-Hindi major Indian languages. A secondary globalization process, thus, may help Hindi, and may not help the other major Indian languages (Mallikarjun 2003).

2. 2. Notion of Mother Tongue

"Mother tongue" is a concept that we all appear to understand very well and take for granted. "Mother tongue" is a very important concept or construct within the Constitution of India. Several important provisions within the Indian Constitution revolve around this concept or construct. Decisions regarding the medium of instruction and other official language policies depend on the interpretation of this concept or construct. More often than not, mother tongue becomes more of a political idea than a linguistic construct or concept. Mother tongues are elevated to some superhuman and divine status, and are worshipped literally. Also, mother tongue becomes a rallying point for groups of people to unite and express their solidarity more as a political entity.

First and foremost, a language policy statement in any multilingual set up is expected to be about 'What should constitute a mother tongue for her citizens?' The first answer to this question in independent India for educational purposes is found in the Provincial Education Ministers resolution (1949) and in the Central Advisory Board of Education approved statement that "The mother-tongue will be the language declared by the parent or guardian to be the mother-tongue." But, till date no clear-cut definition/description of the characteristics of what constitutes a mother tongue that could be applied to a variety of Indian contexts is specified. It is neither possible nor is it necessary. However, we can examine some of these characteristics or features here to understand the difficulties in branding the mother tongue.

The latest Census 2001 defines mother tongue as the language in which the mother was talking to the person in his/her childhood. In case the mother of the child had died, the enumerator should find out the language being spoken in the household; in the case of small children and the dumb (physically challenged), the language spoken by the mother is to be recorded as the mother tongue. If any doubt arises, the language mainly used in the family is recorded as the mother tongue. Thus, this Census also focuses more on the language of early childhood experience and calls it the mother tongue.

The Census recognizes also the possibility that the members of the same family may have different mother tongues. For example, there are many families in which the husband may be of a different ethnic group than that of the wife, and both may have different, not identical, mother tongues. So, the enumerator records the mother tongue of each individual in the family.

With this background, let us see what language rights activists consider as mother tongue in their literature (Tove Skutnabb-Kangas 1981).

| Criterion | Definition of "mother tongue" | Discipline |
|----------------------------|---|---|
| origin | <i>the language one learnt first (the language in which one established one's first lasting communication relationship)</i> | Sociology |
| competence | <i>the language one knows best</i> | Linguistics |
| function | <i>the language one uses most</i> | Sociolinguistics |
| attitudes | <i>the language one identifies with (internal identification)</i> | social psychology, psychology of the individual |
| | <i>the language one is identified as a native speaker of by other people (external identification)</i> | social psychology sociology |
| (automacy) (world view) | <i>(the language one counts in, thinks in, dreams in, writes a diary in, writes poetry in, etc.)</i> | popular conceptions |

The Indian judiciary too has debated and adjudicated on what should be considered as mother tongue. In the recent (2000) petition the Madras High Court adjudicated that "...mother-tongue of a child should only be understood for the purpose of these cases as the language which the child is most familiar with ... mother-tongue need not be the mother's tongue or father's tongue. Generally, the parents are the proper persons who can assess and say as to which is the language, that child is most familiar with." Due to the multilingual nature of the states and the country, the notion of second mother tongue too is introduced by the judiciary. The High Court of Karnataka in its recent judgment relating to language choice for education treated Kannada as the second mother tongue of Tulu and Kodagu mother tongue speakers since they are indigenous to Karnataka.

2.3. Administration

Due to their co-existence from time immemorial, the plural societies with people of multi-cultural, multi-ethnic and multi-lingual background belonging to different socio-economic strata, give birth to natural communication policies to suit their realities with a genuine understanding of interwoven relations. The language of administration is not an exception. A nation is historically evolved, hence it is essential to know about the languages that the rulers of a country used for administration of their region. Many Indian rulers ruled territories in which different languages were used for communication by their subjects. Often the language of the king and the language of those whom he ruled were different. Historically in India, the language of the people and the language or languages used to govern them used to correspond with each other. In India, though there are instances after instances wherein only one language was the Official Language, it is very difficult to find a point of time where only one language was used as the sole language of administration in a specific region. It seems that the official language was used for the purposes of rules and other interrelated activities. And these were used within the set up of the Government to a large extent. However, the languages of the people were used for all the necessary communicative purposes, and plurality was thus honored.

There is a distinction between the 'Official Language' and 'Language(s) used in Administration' (Mallikarjun 1986). To illustrate this point, an example can be cited here. Though the Official Language Act of Andhra Pradesh, 1966 recognizes Telugu as the Official Language for use in its territory, it also permits the use of English, Urdu, Kannada, Tamil and Oriya in certain specified situations and regions for administrative activities. Hence, these latter ones are the Languages Used in Administration in Andhra Pradesh though only Telugu is the Official Language. Like this, each state and the union territory, including the Union Government, have

honored the linguistic plurality by accommodating interests of the speakers of other languages as well, even after declaring one or two languages as the official languages of the concerned state. After the promulgation of the Official Language Acts the following 16 languages are the Official Languages in different states and union territories : Assamese, Bengali, English Gujarati, Hindi, Kannada, Konkani, Malayalam, Nepali, Manipuri, Marathi, Oriya, Punjabi, Tamil, Telugu and Urdu. However, English remains the language of judiciary at the higher level.

2. 4. Education

The Constitution of India makes provision for '... free and compulsory education for all children until they complete the age of fourteen years.' But the Constitution has no explicit statements regarding the language(s) to be taught in education or the language(s) through which education has to be imparted (except in the case of linguistic minorities). This may have been a tactical compromise or declaration on the part of the Constitution makers, because every one could sense the great linguistic complexity of free and democratic India.

The **National Policy on Education of 1968** spoke about the regional languages and the Three Language Formula. The 1986 Policy reiterated the earlier stand. The **States Reorganization Commission** had asked the Union Government to elucidate a policy outline for education in mother tongue at the Secondary stage. The **All India Council for Education** recommended the adoption of the Three Language Formula (TLF) in September 1956. The endorsement for this formula came from various directions. It was adopted by the Chief Ministers' conference. The National Policy on Education 1968 recommended the inclusion of the TLF 'which includes the study of a modern Indian language, preferably one of the Southern languages, apart from Hindi and English in the Hindi speaking states, and of Hindi along with the regional language and English in the non Hindi-speaking states at the Secondary stage. This was reiterated in the **Education Policy 1986** and was adopted as the **Programme of Action** by the Parliament in 1992.

These are major attempts to arrive at a language policy for education. Since education is in the concurrent list of the Seventh Schedule of the Constitution, the language policy formulation for education and its implementation is left to the State governments under the Constitutional safeguards and broad guidelines cited above.

The **National Curriculum Framework for School Education: A Discussion Document released on January 1, 2000**, while reviewing the Three Language Formula, states,

- In a number of states/organizations/ boards, however, the spirit of the formula has not been followed and the mother tongue of the people has been denied the status of the first language ... because of the changed socio-economic scenario, the difference between the second and the third languages has dwindled. Thus, in reality, there may be two-second languages for all purposes and functions. Some states follow only a two-language formula whereas in some others classical languages like Sanskrit and Arabic are being studied in lieu of a modern Indian language. Some boards/institutions permit even European languages like French and German in place of Hindi. In this scenario, the three-language formula exists only in our curriculum documents and other policy statements.

According to this document the three languages are: (i) Home Language/ Regional Language, (ii) English, and (iii) Hindi in non-Hindi speaking states and any other Modern Indian Language in Hindi speaking states.

With all these provisions for education in multiple languages and mother tongues, the Sixth All India Education Survey(1999) informs that 41 languages are taught as school languages, and 19 of them are used as media of instruction at different levels.

Number of School Languages Taught as First/Second/Third Languages

| | Third Survey | Fifth Survey | Sixth Survey |
|---------------------|--------------|--------------|--------------|
| Number of languages | 67 | 44 | 41 |

Medium of Instruction (Number of Languages)

| Stage | Fifth Survey | Sixth Survey |
|------------------|--------------|--------------|
| Primary | 43 | 33 |
| Upper primary | 31 | 25 |
| Secondary | 22 | 21 |
| Higher Secondary | 20 | 18 |

As one goes up in the ladder of education, the number of languages available for him to study and the medium of instruction become less. Though many languages are media of instruction at the lower level, only English is the medium of technical and management education.

Names of School Languages and Medium of Instruction

| | | | |
|----------|-----------|------------|----------|
| Angami | Gujarati | Lotha | Punjabi |
| Ao | Hindi | Malayalam | Sanskrit |
| Arabic | Kakhbarak | Manipuri | Sema |
| Assamese | Kannada | Marathi | Tamil |
| Bengali | Kashmiri | Maithili | Telugu |
| Bhutia | Khasi | Mizo | Tibetan |
| Bodo | Konkani | Nepali | Urdu |
| Dogri | Konyak | Nicobaree | Zeliang |
| English | Laddakhi | Oriya | |
| French | Lepcha | Persian | |
| Garo | Limboo | Portuguese | |

2. 5. Mass Communication

Print Media: Here, people's choice of languages in which they wish to read the news and related information directs the language policy to be adopted. There is no bar on starting newspapers in any language or dialect in the country since the private sector mainly rules this domain. Also, there is no bar on any language to be written in any script in India. The print media in India got initiated in 1780. Since then it has grown enormously. Also, their growth is steady over the years. According to the 2002 Survey, newspapers and periodicals are published in 101 languages and dialects. They are as follows:

| | | | | |
|-------------|----------|----------------|---------------|----------|
| Ahirani | French | Kashmiri | Multi-Lingual | Sinhali |
| Anal | Ganje | Khasi | Muridari | Sirayaki |
| Angami Naga | Garhwali | Koch-Rajbanshi | Nagaa | Spanish |
| Angika | Garo | Kodava | Nepali | Swahili |
| Anglo | Gaundi | Kokborok | Nicobari | Syrian |
| Arabic | German | Konkani | Oriya | Tamil |

| | | | | |
|---------------|--------------------|---------------|------------|---------------|
| Assamese | Goani | Koshli-Oriya | Pahari | Telugu |
| Banjara | Gorkhali /Nepali | Kuki | Pali | Thadou-Kuki |
| Bangali | Greek | Kumauni | Persian | Thandon |
| Bhojpuri | Gujarathi | Kurbi | Piate | Thankhul Naga |
| Biate | Halbi | Lakhar-Mara | Piate-Pau | Tibetan |
| Bihari | Haruti | Latin | Pitalri | Tiddinchin |
| Bi-lingual | Haryanvi | Lushai | Portuguese | Tripuri |
| Bishnupriya | Himachali | Magahi | Punjabi | Tulu |
| Bodo | Hindi | Maithili | Pushto | Urdu |
| Burmese | Hindustani-Persian | Malayalam | Rajasthani | Vaiphei |
| Chakma | Hmar | Manipuri | Rongamei | Yugaslavia |
| Chhatisgarghi | Indonesia | Marathi | Russian | Zemi Naga |
| Chinese | Italian | Marwari | Sanskrit | Zokan |
| Dogri | Jaintal | Meetelion | Santhali | |
| English | Kabur | Mikir | Saurashtra | |
| Esperanto | Kanarese | Mising | Simite | |
| Finish | Kannada | Mizo - Lushai | Sindhi | |

It may be seen that foreign languages are also part of this list. However, Hindi tops the ranking of the languages, according to the number of newspapers being published in any language: Hindi (2507), Urdu (534), English (407), Marathi (395), Tamil (395), Kannada (364), Malayalam (225), Telugu (180), Gujarati (159), Punjabi (107), and Bengali (103). In terms of readership in languages in various languages the Survey 2003 provides us with some very interesting figures. As per the National Readership Survey 2003, the top ten newspapers and their languages readership are as follows:

| Rank | Name of the Publication | Readership (in 'lakhs) |
|------|-------------------------------|------------------------|
| 1 | Dainik Bhaskar (Hindi) | 157.09 |
| 2 | Dainik Jagran (Hindi) | 149.85 |
| 3 | Daily Thanthi (Tamil) | 100.94 |
| 4 | Eenadu (Telugu). | 094.58 |
| 5 | Malayala Manorama (Malayalam) | 087.98 |
| 6 | Amar Ujala (Hindi) | 086.40 |
| 7 | Hindustan (Hindi) | 078.99 |
| 8 | Lokmat (Marathi) | 078.67 |
| 9 | Mathrubhumi (Malayalam) | 076.46 |
| 10 | Times of India (English) | 074.19 |

According to the same study, in terms of all-India readership (urban + rural), the top ten magazines are:

| Rank | Name of the Publication | Readership (in 'lakhs) |
|------|-------------------------|------------------------|
| 1 | Saras Salil (Hindi) | 93.85 |
| 2 | India Today (Hindi) | 59.00 |

| | | |
|----|------------------------------|-------|
| 3 | Vanitha (Malayalam) | 55.14 |
| 4 | Grihashobha (Hindi) | 54.14 |
| 5 | Malayala Manorama(Malayalam) | 54.06 |
| 6 | Meri saheli(Hindi.). | 42.66 |
| 7 | India Today(English). | 41.94 |
| 8 | Balarama(Malayalam). | 39.58 |
| 9 | Mangalam(Malayalam). | 35.78 |
| 10 | Filmfare(English). | 35.18 |

The *National Readership Survey 2002* conducted by the National Readership Studies Council (NRSC) says that there is sharp growth in the sales of English newspapers in towns with populations ranging from one lakh to five lakhs, whereas growth in Hindi and regional language newspapers is from the towns with populations below five lakhs. English is becoming more popular in the rural areas due to the growth and development of reading skill in English through school. English, thus, is establishing a solid mass base for itself in the rural areas.

The language policy of India in status, corpus and acquisition planning, as we said earlier, protects and preserves plurality in all domains of language use in spite of presence of languages with 'power'. Though the UNESCO reports that "...about half of the approximately 6000 languages spoken in the world are under threat, seriously endangered or dying," it does appreciate that "India has maintained its extensive and well-catalogued linguistic diversity, thanks to its government policies."

3. 0. DIGITAL DIVIDE

Apart from the linguistic divide, India faces many other divides revolving around ethnicity, religion, region, social identity, rural/urban, literate/illiterate, etc. Majority of her population live in the rural areas. In 2001 urbanites constituted 27.24% whereas the rural population was 72.24%. The rate of literacy for the entire country in 2001 was 65.2 %, with the highest literacy in Kerala above 90%, lowest literacy in Bihar less than 50%, rural literacy at 59%, urban at 80%, males at 76%, and females at 54%. We may learn few lessons when we study as to how India tried to bridge these divides.

India approached the rural/urban divide issue through rapid urbanization and creation of near equal infrastructure in the rural areas. Similarly, the literate/illiterate divide was approached through the movements for mass adult literacy, combined with education for all through schooling. The religious divide was sought to be bridged by declaring the nation secular, and by providing Constitutional protection to religious minorities, thereby to a large extent religious harmony was maintained except for some rare aberrations.

In all the Indian languages, however, a different kind of digital divide is also developing. On the one hand, the level of literacy in the mother tongue/regional language is on the increase because of the accelerated effort from the non-formal and informal sectors, and, on the other hand, in the formal sector of education, literacy in mother tongue is losing value in the context of demand for English and computer literacy (Mallikarjun 2003).

3. 1 Information Technology

Enter IT revolution, we see the emergence of an information society, scattered and loosely connected, and created by the rapid surge in the information and communication technologies. But the slow pace with which the Indian society is trying to absorb these technologies through its organs such as language has added one more divide to the many already existing - the "digital divide" resulting in the disparity in access to information and to the means of communication in Modern India in the 21st Century.

Computer penetration in India is estimated to be 7.5 per 1000 people but at the same time the internet is able to reach only about one percent of the total population of the country.

Internet subscription – in India actually is only by the 0.4 percentage of the population according to the 2003 report of the TRAI. The Indian languages in which the internet search engine Google can search is – Bengali, Hindi, Marathi, Tamil and Telugu.

Persistent and intense maintenance of the digital divide may result in more retrograde and disastrous steps than all other divides put together, because a new generation of people with same color and blood (to play with the phrase introduced by Lord Macaulay in his Minute in 1834) but with no commitment to the locals will homogenize everything resulting in the loss of age-old pluralism that endangered freedom. So, since what people want in the digital world is not available in their languages, both the government and the people are fast moving towards introducing English at the earliest level in education.

The language vitality - capacity of a language to live, grow, and develop - depends upon various factors. Some of these are: social status, demography, and institutional support. Access to Information and communication technology in their own language is one of the ways to empower the people and enhance the vitality of a language.

3. 2. Current Status and Future Projection

Though gradually internet is evolving as a mass media, the entry of computer technology in India is not mass oriented, like other mass media such as radio, newspaper, etc. It is elitist in orientation, and it is also government-oriented. Normally for any policy extension initiated by the government, the government wants a list of languages. It will start with Hindi the official language of the Union at the first instance, and then move towards, at the second instance, to the Scheduled Languages. As I already mentioned earlier in this paper, the TDIL initiative of the Government of India not only did not percolate beyond the Scheduled languages, but it did not also benefit all the scheduled languages uniformly.

A recent report (2003) by the MAIT-COIL Tech group about the reach of computer/internet technology to Indian languages gives a fairly good idea about the coverage as well as the projections for the future. *It is absurd and painful that the report calls Indian languages as local languages.* But some of the findings and projections are of interest to us. According to the report, the government has spent Rs.970 to Rs.1455 crores to spread IT among the people and had undertaken more than 1000 projects with success rate around 40%. The market growth is expected in: Introduction and promotion of new web based technology solutions and applications to cater to the growing needs of the end users; Increasing content creation in Indian languages for the web; Initiatives in local language projects being undertaken by vendors, central and state governments; Initiatives revolving around commercialization of products and applications being developed in the numerous research labs in India. Some of the projections of the report are in the annexure II.

Though much is said, less of what is said is actually delivered to the end user. A lot needs to be done, and the Indian languages other than major ones are yet to be approached by the technology initiatives.

3.3. Technology and Empowerment of Languages

I would like to look at information technology as a tool for empowering Indian languages and their speakers, but the localization of software is only a small part of this process of empowerment. Only localization per se may not be successful to bridge the digital divide.

The digital divide has to be discussed not only in the context of linguistic issues, but also in the context of other technical issues, since it involves **convergence of many related technologies**,

the **economic resources**(per capita) available with people to take steps to cross the digital divide and so on. The 2002 GDP by language prepared by the World Bank, CIA Fact book gives an indication about the same. The same for Bengali – 0.44%; Gujarati – 0.26%;Hindi – 2.14%; Marathi – 0.4%; Tamil- 0.34% ;Telugu- 0.42% , Urdu- 0.28% and English – 29.94%.

The **speed** with which the **technology** changes or **gets updated** is enormous, and hence the immediate and long term strategy to cope with the same is to be thought out right from the beginning.

Localization has two aspects and multilayer - language localization and localization of culture specific aspects, and standardization. Where two or more variants are in use, the question is to allow the variants to remain in use, or bring them in through standardization, keenly following the community opinion. Cultural localization will give a fillip to revival of some of the traditions relating to date, day, time and some other important formats. Localization in case of Indian languages is not of single layer since a script is used to write many languages, it is multilayered one; for example once localization for Kannada and then for languages written in Kannada script like Tulu and Kodagu.

Oracy - India's strength is in its oral tradition. The reason for its mass illiteracy is its age old belief that the knowledge can be transformed from generation to generation through oral tradition. And that is how the Vedas came from generation to generation for centuries until they got rendered into writing. As has been mentioned earlier, many of the languages do not have their own scripts as they adopted one of the existing scripts, or continue to transmit the knowledge through oral tradition. This mode, needs to be explored further.

Inter-dependence characterizes the multilingual situation in India. A kind of complementary distribution of various languages used in a community, or household, or in the life of an individual in various domains of use has always characterized the Indian multilingual situation. I do not see why we should not take advantage of this inter-dependence and aim at localizing software based on the needs, distribution already in motion among various dialects or languages in a community and within a political/administrative unit. For example, there are clear official orders in several states which delineate the use of a variety of languages or dialects for purposes down to the level of taluq administration. In some districts, a dominant language of the neighboring state may be allowed as medium of instruction and/or language of communication for official purposes. Software localization will benefit by these indicators very much. But there may be other problems. The generally followed prestigious dialect in the neighboring state may not be understood or used by the linguistic minority in the above mentioned border areas. Comprehensibility of the standard dialect in a border region is often under question. Moreover the jargon used in a state for certain communicative purposes may not be used by the neighboring state. These issues can be sorted out, if there is an appreciation that it is good for the community to introduce the technology using their own dialect or languages. Often such understanding will not be readily forthcoming even from the software scientists. We look towards greater homogenization because we wrongly assume that homogenization will result in better software, and greater use of the same. It is easy for us to ignore the linguistically complex Indian demography and seek to impose a solution through the tool of homogenization.

Uneven progress - in the development and utilization of software even among the major Indian languages will continue to be a reality. We should be ready to accept this reality. If our past experience in engineering the development of major Indian languages as fit vehicles for education and administration is any indication, infusing massive governmental funds alone will not bring drastic changes in the situation. People's participation, in the case of IT, participation of grassroots software workers, in this process as devoted voluntary work, may make some impact. For example, through many discussion groups in the internet, young Tamil software engineers settled abroad show great interest in issues relating to the development of Tamil as a fit vehicle for various uses in the internet. However, their focus is more on the Unicode for Tamil, or, unfortunately, on the reformation of the traditional script used in Tamil to suit the needs of the

internet protocol, etc. There are similar groups functioning among the Telugu, Marathi and Kannada software engineers also. While such efforts are always welcome, the digital divide as such will be bridged only by the efforts from within India, particularly if programmers are initiated to solve the immediate problems faced in the day-to-day contacts with the government, and other agencies and businesses with the local languages or dialects as the medium.

The IT perhaps entered India from other shores, and Indians have mastered it in many ways as providers of solutions for good profit, but they need to look within and produce stuff that will change the scene at the village, taluq, and district levels in India. Once this direction is accepted, solving linguistic issues may become a very interesting, engaging, and rewarding pursuit for the young minds.

Let us remember that every thing that English has or for that matter what Hindi is going to have can not be had by all languages but certainly they can increase their vitality by becoming part of the IT world in as many possible ways as they can than being left out of the race. At present most of them are out of the race. We need different action plans for major and minor languages of India since their technology needs are different.

Open source – Today, language technology is accessible only to a microscopic population of India. Even this microscopic coverage is able to make tremendous impact on the way the campaign for election is conducted, country is administered, and population is educated and informed with the convergence of technologies. The day when world knowledge is accessible in all possible Indian languages technology and it covers at least fifty percent of population India may join the elite club of developed countries. Recent publication 'E-commerce and Development Report 2003' by the United Nations Conference on Trade and Development(UNCTAD) provides an insight into the software that developing countries can use for bridging the digital divide. It recommends use of free or open source software as against the proprietary license-to-use software.

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BILINGUALISM AND TRILINGUALISM OF SPEAKERS OF MINOR LANGUAGES - 1991

| Non-scheduled Languages | | Number of persons knowing two or more languages | Percentage of people knowing two or more languages | Number of persons knowing three languages | Percentage of people knowing three languages |
|-------------------------|----------------|---|--|---|--|
| Name | Total speakers | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 Adi | 158,409 | 57,294 | 36.17 | 33,257 | 20.99 |
| 2 Anal | 12,156 | 7,471 | 61.46 | 2,601 | 21.40 |
| 3 Angami | 97,631 | 42,995 | 44.04 | 24,442 | 25.04 |
| 4 Ao | 172,449 | 51,763 | 30.02 | 21,625 | 12.54 |
| 5 Arabic/Arbi | 21,975 | 11,737 | 53.41 | 4,201 | 19.12 |
| 6 Bhili / Bhilodi | 5,572,308 | 1,075,929 | 19.31 | 207,298 | 3.72 |
| 7 Bhotia | 55,483 | 33,814 | 60.94 | 12,537 | 22.60 |
| 8 Bhumij | 45,302 | 22,485 | 49.63 | 5,829 | 12.87 |
| 9 Bishnupuriya | 59,233 | 39,765 | 67.13 | 14,169 | 23.92 |
| 10 Bodo/Boro | 1,221,881 | 462,686 | 37.87 | 161,791 | 13.24 |
| 11 Chakhesang | 30,985 | 12,517 | 40.40 | 6,638 | 21.42 |
| 12 Chakru/ Chokri | 48,207 | 13,079 | 27.13 | 6,842 | 14.19 |
| 13 Chang | 32,478 | 6,293 | 19.38 | 2,664 | 8.20 |
| 14 Coorgi / Kodagu | 97,011 | 83,878 | 86.46 | 47,535 | 49.00 |
| 15 Deori | 17,901 | 12,322 | 68.83 | 4,093 | 22.86 |
| 16 Dimasa | 88,543 | 41,415 | 46.77 | 19,904 | 22.48 |
| 17 Dogri | 89,681 | 46,674 | 52.04 | 26,695 | 29.77 |
| 18 English | 178,598 | 119,638 | 66.99 | 49,120 | 27.50 |
| 19 Gadaba | 28,158 | 16,216 | 57.59 | 943 | 3.35 |
| 20 Gangte | 13,695 | 4,848 | 35.40 | 1,284 | 9.38 |
| 21 Garo | 675,642 | 123,958 | 18.35 | 42,896 | 6.35 |
| 22 Gondi | 2,124,852 | 899,567 | 42.34 | 134,156 | 6.31 |
| 23 Halabi | 534,313 | 131,861 | 24.68 | 22,454 | 4.20 |
| 24 Halam | 29,322 | 12,282 | 41.89 | 2,867 | 9.78 |
| 25 Hmar | 65,204 | 19,913 | 30.54 | 8,280 | 12.85 |
| 26 Ho | 949,216 | 302,167 | 31.83 | 74,072 | 7.80 |
| 27 Jatapu | 25,730 | 16,333 | 63.48 | 1,025 | 3.98 |

| | | | | | |
|-------------------|-----------|---------|-------|---------|-------|
| 28 Juang | 16,858 | 8,673 | 51.45 | 83 | 0.49 |
| 29 Kabui | 68,925 | 29,734 | 43.14 | 8,163 | 11.84 |
| 30 Karbi / Mikir | 366,229 | 170,939 | 43.68 | 51,426 | 14.04 |
| 31 Khandeshi | 973,79 | 398,028 | 40.88 | 153,195 | 15.73 |
| 32 Kharia | 225,556 | 128,054 | 66.77 | 22,287 | 9.88 |
| 33 Khasi | 912,283 | 114,920 | 12.60 | 30,126 | 3.30 |
| 34 Khezha | 13,004 | 5,127 | 39.43 | 3,470 | 26.68 |
| 35 Khiemnungan | 23,544 | 2,740 | 1.64 | 1,429 | 6.07 |
| 36 Khond / Kondh | 220,783 | 81,885 | 37.09 | 6,793 | 3.08 |
| 37 Kinnauri | 61,794 | 37,219 | 60.23 | 7,961 | 12.88 |
| 38 Kisan | 162,088 | 93,735 | 57.83 | 14,670 | 9.05 |
| 39 Koch | 26,179 | 10,363 | 39.59 | 5,362 | 20.48 |
| 40 Koda / Kora | 28,200 | 13,319 | 47.23 | 989 | 3.51 |
| 41 Kolami | 98,281 | 59,391 | 60.43 | 6,217 | 6.33 |
| 42 Kom | 13,548 | 6,497 | 47.96 | 1,979 | 14.61 |
| 43 Konda | 17,864 | 10,324 | 57.79 | 1,934 | 10.83 |
| 44 Konyak | 137,722 | 28,532 | 20.72 | 12,628 | 9.17 |
| 45 Korku | 466,073 | 274,718 | 58.94 | 35,692 | 7.66 |
| 46 Korwa | 27,485 | 13,819 | 50.28 | 1,195 | 4.35 |
| 47 Koya | 270,994 | 147,320 | 54.36 | 1,419 | 0.52 |
| 48 Kui | 461,662 | 243,568 | 37.96 | 22,493 | 3.51 |
| 49 Kuki | 58,263 | 27,646 | 47.45 | 11,753 | 20.17 |
| 50 Kurukh / Oraon | 1,426,618 | 768,169 | 53.85 | 98,043 | 6.87 |
| 51 Lahauli | 22,027 | 14,946 | 67.85 | 3,979 | 18.06 |
| 52 Lahnda | 27,386 | 15,364 | 56.10 | 7,699 | 28.11 |
| 53 Lakher | 22,947 | 6,660 | 29.02 | 807 | 3.52 |
| 54 Lalung | 33,746 | 20,762 | 61.52 | 6,074 | 18.00 |
| 55 Lepcha | 39,342 | 23,044 | 58.57 | 7,746 | 19.69 |
| 56 Liangmei | 27,478 | 10,123 | 53.84 | 3,898 | 14.19 |
| 57 Limbu | 28,174 | 16,907 | 60.01 | 3,810 | 13.52 |
| 58 Lotha | 85,802 | 31,347 | 36.53 | 18,569 | 21.64 |
| 59 Lushai / Mizo | 538,842 | 53,253 | 9.88 | 11,823 | 2.19 |
| 60 Malto | 108,148 | 41,561 | 38.43 | 15,523 | 14.35 |
| 61 Mao | 77,810 | 24,475 | 31.45 | 14,153 | 18.19 |
| 62 Maram | 10,144 | 3,675 | 37.12 | 2,187 | 21.56 |
| 63 Maring | 15,268 | 9,400 | 61.57 | 1,242 | 8.13 |

| | | | | | |
|--------------------|------------|------------|-------|-----------|--------|
| 64 Miri / Mishing | 390,583 | 202,365 | 51.81 | 48,171 | 12.33 |
| 65 Mishmi | 29,000 | 12,523 | 43.18 | 7,516 | 25.92 |
| 66 Mogh | 28,135 | 9,770 | 34.73 | 467 | 1.66 |
| 67 Monpa | 43,226 | 11,895 | 27.52 | 3,469 | 8.03 |
| 68 Munda | 413,894 | 181,812 | 43.93 | 43,034 | 10.40 |
| 69 Mundari | 861,378 | 414,472 | 48.12 | 46,519 | 5.40 |
| 70 Nicobarese | 26,261 | 10,963 | 41.75 | 4,503 | 17.15 |
| 71 Nissi / Dafla | 173,791 | 45,571 | 26.22 | 26,160 | 15.05 |
| 72 Nocte | 30,441 | 12,007 | 39.44 | 6,669 | 21.91 |
| 73 Paite | 49,237 | 11,828 | 24.02 | 2,971 | 6.03 |
| 74 Parji | 44,001 | 25,309 | 57.52 | 6,119 | 13.91 |
| 75 Pawi | 15,346 | 4,917 | 32.04 | 465 | 3.03 |
| 76 Phom | 65,350 | 19,483 | 29.81 | 10,291 | 15.75 |
| 77 Pochury | 11,231 | 4,923 | 43.83 | 2,683 | 23.89 |
| 78 Rabha | 139,365 | 79,906 | 57.34 | 17,297 | 12.41 |
| 79 Rengma | 37,521 | 9,622 | 25.64 | 6,316 | 16.83 |
| 80 Sangtam | 47,461 | 13,141 | 27.69 | 6,798 | 14.13 |
| 81 Santali | 5,216,325 | 2,087,805 | 40.02 | 279,416 | 5.36 |
| 82 Savara | 273,168 | 122,131 | 44.71 | 1,647 | 4.26 |
| 83 Sema | 166,157 | 47,827 | 28.78 | 27,447 | 16.52 |
| 84 Sherpa | 16,105 | 10,979 | 68.17 | 3,170 | 189.68 |
| 85 Tangkhul | 101,841 | 41,199 | 40.45 | 10,742 | 10.55 |
| 86 Tangsa | 28,121 | 14,528 | 51.66 | 8,826 | 31.39 |
| 87 Thado | 107,992 | 40,917 | 37.89 | 9,772 | 9.05 |
| 88 Tibetan | 69,416 | 35,678 | 51.40 | 19,125 | 27.55 |
| 89 Tripuri | 694,940 | 310,818 | 44.73 | 33,555 | 4.83 |
| 90 Tulu | 1,552,259 | 1,069,290 | 68.89 | 250,181 | 16.12 |
| 91 Vaiphei | 26,185 | 8,887 | 33.94 | 2,278 | 8.70 |
| 92 Wancho | 39,600 | 9,203 | 23.24 | 4,805 | 12.13 |
| 93 Yimchungre | 47,227 | 9,813 | 20.78 | 4,057 | 8.59 |
| 94 Zeliang | 35,079 | 11,034 | 31.45 | 4,346 | 12.39 |
| 95 Zemi | 22,634 | 7,719 | 34.10 | 2,608 | 11.52 |
| 96 Zou | 15,966 | 4,087 | 25.60 | 1,211 | 7.58 |
| 97 Other languages | 565,949 | 354,874 | 62.70 | 128,516 | 22.71 |
| Total | 31,126,324 | 11,872,532 | 38.14 | 2,577,195 | 8.28 |

**Annexure II
MAIT-COIL Tech Report Extracts**

Local Language Software Market: Revenues in Rs. Crores by Product Type (India), 1998-2005

| Challenge | 1-2 Years | 3-4 Years | 5-7 Years |
|---|------------------|------------------|------------------|
| Lack of standards | High | Medium | Low |
| Limited availability of software, fonts | High | High | Medium |
| Low Availability of Local Language Content | High | Medium | Low |
| Slow technology progress | Medium | Medium | Low |
| Users Need for evaluation and certification | High | Medium | Low |

Local Language Software Market: Market Drivers Ranked in Order of Impact (India), 2003-2009

| Rank | Driver | 1-2 Years | 3-4 Years | 5-7 Years |
|-------------|---|------------------|------------------|------------------|
| 1 | Newer areas of applications for Local Language IT | High | High | Medium |
| 2 | Government initiatives | High | High | Medium |
| 3 | Bundling of multi-lingual software | High | Medium | Low |
| 4 | Advanced research | High | Medium | Medium |

Local Language Software Market: Market Restraints Ranked in Order of Impact (India), 2003-2009

| Rank | Restraint | 1-2 Years | 3-4 Years | 5-7 Years |
|-------------|--|------------------|------------------|------------------|
| 1 | Lack of formal language-based IT training | High | High | Medium |
| 2 | Limited usage of available local language applications | High | Medium | Medium |
| 3 | Lack of spending | High | High | Medium |
| 4 | Low connectivity | High | High | High |

Local Language Software Market: Revenues in Rs. Crores Forecasts (India), 1998-2005

| Year | Revenues (Rs. Crores) | Revenue Growth Rate (%) |
|--|----------------------------------|------------------------------------|
| 1998 | 1.9 | |
| 1999 | 9.7 | 400 |
| 2000 | 16.5 | 70 |
| 2001 | 29.1 | 76 |
| 2002 | 53.4 | 83 |
| 2003 | 97.0 | 82 |
| 2004 | 174.6 | 80 |
| 2005 | 310.4 | 78 |
| Compound Annual Growth Rate (2002-2005): 79.9% | | |

Local Language Software Market: Revenues in Rs. Crores by Product Type (India), 1998-2005

| | Word Processing | Packages | DTP | Video |
|------|-----------------|----------|------|-------|
| 1998 | 1.4 | 0.2 | 0.4 | - |
| 1999 | 5.8 | 1.5 | 1.9 | 0.5 |
| 2000 | 8.2 | 3.3 | 3.3 | 1.6 |
| 2001 | 14.0 | 5.8 | 5.8 | 3.5 |
| 2002 | 25.6 | 10.7 | 9.6 | 7.5 |
| 2003 | 43.7 | 22.3 | 15.5 | 15.5 |
| 2004 | 78.6 | 43.7 | 21.0 | 31.4 |
| 2005 | 139.7 | 77.6 | 37.2 | 55.9 |

Local Language Software Market: Revenues in Rs. Crores by End User (India), 1998-2005

| Year | E-governance | Publish | Enterprises/factories | SOHO | Multimedia | Others |
|------|--------------|---------|-----------------------|----------|------------|--------|
| 1998 | 0.2 | 0.9 | 0.7 | 0.1..... | 0.0 | 0.1 |
| 1999 | 1.5 | 4.1 | 2.4 | 0.6..... | 0.4 | 0.8 |
| 2000 | 4.0 | 5.9 | 3.5 | 1.0..... | 1.2 | 1.0 |
| 2001 | 9.6 | 9.3 | 5.2 | 1.5..... | 2.0 | 1.5 |
| 2002 | 20.3 | 14.4 | 9.1 | 2.7..... | 3.7 | 3.2 |
| 2003 | 41.7 | 23.3 | 13.6 | 3.9..... | 7.8 | 6.8 |
| 2004 | 89.0 | 36.7 | 19.2 | 7.0..... | 12.2 | 10.5 |
| 2005 | 180.0 | 55.9 | 34.1 | 9.3..... | 18.6 | 12.4 |

Local Language Software Market: Total Spend on e-Governance in Rs. Crores by States (India), 2002

| Project | AP | Maha | MP | Guj | WB | Karn | Ker | UP | Raj | TN | Pun |
|---------|------|------|------|------|------|------|------|------|------|------|-----|
| LR | 30.3 | 30.3 | 30.3 | - | 30.3 | 30.3 | 15.2 | 15.2 | 15.2 | 30.3 | - |
| LA | 50.0 | - | - | - | - | - | - | - | - | - | - |
| eseva | 5.0 | 5.0 | - | 0.7 | - | - | 6.1 | - | - | - | - |
| trans | 0.5 | - | - | 1.0 | 1.0 | 1.0 | - | 1.0 | - | - | - |
| Muni | 2.0 | - | - | - | 1.0 | 3.1 | - | 1.0 | - | - | - |
| Gov | 21.2 | 21.2 | - | 64.7 | 64.7 | - | 21.2 | 21.2 | 21.2 | - | - |
| Olpt | 2.0 | - | - | - | - | - | - | - | - | - | - |
| Fin | 4.6 | - | - | - | - | - | - | - | - | - | - |
| Proc | - | - | - | - | - | 2.0 | - | - | - | - | - |
| Hr | 1.0 | - | - | - | - | - | - | - | - | - | - |
| Welf | 1.0 | - | - | - | - | - | - | - | - | - | - |

| | | | | | | | | | | | |
|-----------|------|---|---|-----|------|------|-----|-----|---|---|-----|
| Police | 16.2 | - | - | - | 16.2 | 16.2 | - | - | - | - | - |
| vadodra | - | - | - | 1.2 | - | - | - | - | - | - | - |
| treaus | - | - | - | 1.0 | - | 1.0 | 1.0 | 1.0 | - | - | - |
| website | - | - | - | 1.0 | 1.0 | 1.0 | - | - | - | - | 1.0 |
| tax | - | - | - | - | - | 1.0 | - | - | - | - | - |
| insurance | - | - | - | - | - | 1.0 | - | - | - | - | - |
| environ | - | - | - | - | - | 1.0 | - | - | - | - | - |
| SSI | - | - | - | - | - | 1.0 | - | - | - | - | - |
| griev | - | - | - | - | - | - | - | 1.0 | - | - | - |

Local Language Software Market: Percent of Revenues by State (India), 2002

| State | Revenue (%) |
|----------------|--------------------|
| Andhra Pradesh | 23.6 |
| Gujarat | 12.9 |
| West Bengal | 12.4 |
| Karnataka | 10.3 |
| Maharashtra | 9.9 |
| Kerala | 8.3 |
| Rajasthan | 6.4 |
| Uttar Pradesh | 5.5 |
| Madhya Pradesh | 5.3 |
| Tamil Nadu | 5.3 |
| Punjab | 0.2 |

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