5. Orthography

5.0 Preview

Orthography is one of the most important aspects in the present research. Therefore, it has been felt to be necessary to enter into a greater level of detail to cover the various issues and aspects than might otherwise have been necessary. The benefits and risks of orthography development for a minority language community are set out in Section 5.1. This is followed by a discussion on the intricate relationship between orthography and literacy (Section 5.2). Section 5.3 discusses the crucial role played by an orthographic system for the overall success of an MTB-MLE programme. While doing so, this section focuses on the issue of material development and its relation with the use of practical orthographic system for a particular language group. Section 5.4 is concerned with the probable orthographic situations that can be found in the case of linguistic minority groups. This section focuses on the reasons behind the need for either designing a new orthography or for the modification of an existing orthography for a particular language community. Section 5.5 examines various issue and aspects involved in the orthography for the Singpho community. Here, an overview of the Kachin Jinghpaw orthography is provided in 5.5.1, while 5.5.2 highlights the problem areas in the modification of the orthography for the Singpho language. Finally, 5.5.3 presents an account of the practical steps taken during the course of this research towards a modification of the Singpho orthography.

5.1 Introduction

Orthography plays an important role in the development of a language. Developing a writing system for an oral language always involves a number of implications. In this context, Hornberger (1997:360) as cited in Carmen Jany (2010) has observed that ‘Benefits of writing oral languages include written language documentation for language survival, possible expansion of language use to other domains, and the
empowerment of the community due to the misconception that written languages are superior to spoken languages. Moreover, literacy is often linked to power in society’.

On the other hand, the risks of introducing native literacy for an oral language have been summarized in Hinton 2001 as cited in Carmen Jany (2010) as ‘native speakers’ loss of control over language, the freezing and decontextualizing of the language and the possible development of disagreement and divisions within a speech community’.

In view of both the benefits and risks involved, the task of developing orthography for a language community requires a serious effort by all the stakeholders of the endeavour. Basically, a vast range of linguistic and non-linguistic factors come into play while designing and developing an orthographic system for a language community. Linguistic investigation of the sound inventory and its phonetic and phonological characteristics need to be taken up in order to establish the practical graphic representation of the language. It is observed that phoneme-based orthographies are widely accepted as the phonemic systems change more slowly than the phonetic realizations (Carmen Jany, 2010).

Apart from such linguistic factors, orthography development is also deeply related to the social, political and cultural acceptability of the writing system to its users. Such non-linguistic factors appear to play a crucial role in the development and practice of the written form of the language.

5.2 Orthography and literacy

Orthography is one of the foundational aspects of any literacy programme. The practical usability and adequate graphic representation of the language in terms of its sound inventory, contributes to the success of any literacy programme. But graphic representation of the spoken form of a language has always been a tricky issue. Historically, this issue has been dealt with in different ways. The most pertinent question regarding this is whether to ‘write what is said’ or to ‘write what is meant’. Depending on this, there have been different kinds of writing systems which are being used to represent different languages. For example the logographic writing systems use symbols to represent the meaning directly without much correspondence to pronunciation. Chinese uses this kind of logographic writing systems. The Japanese
Kanji writing system which derives from the Chinese also uses the logographic writing
system. Other writing systems, such as the syllabic and alphabetic systems, aim to
represent speech sounds: syllabic writing systems represent the spoken syllable whereas
the alphabetic writing systems represent phonemes. However, within alphabetic writing
systems, there are instances of varying degree of regularity in the representation of the
sound-symbol correspondences. In some cases, such as in German, Dutch and Turkish,
it is much more regular than in the case of English. In the former instances, this
correspondence is more consistent. Therefore, these languages are said to have a
transparent or shallow orthography. In contrast, because of the complex nature of the
sound-symbol correspondences in English, it is said to have an opaque orthography. In
Opaque orthographies the same set of letters may represent different sounds.

At this point, it would be relevant to focus briefly on the issue of whether the
orthography used by a particular language group affects the acquisition of basic literacy
skills of their children. Discussing the orthographic depth hypothesis, Katz and Frost
(1992) summarise that shallow orthographies should be easier to read using word-
recognition processes that involve the phonology of the language. In this regard, Ellis et
al (2004) refer to the study of Seymour, Aro, and Erskine (2003) which compared the
abilities of first-grade children to read familiar words and simple non-words in English
and 12 other European orthographies. Ellis et al (2004) observe, 'The results showed
that children from most European countries were accurate and fluent in reading before
the end of the first school year, with word reading accuracies exceeding 90% in all
except the more opaque orthographies of Portuguese, French, Danish, and,
particularly, English. Seymour, Aro, and Erskine attributed these findings to
orthographic depth, which affected both word and non-word reading, and to syllabic
complexity, which affected non-word decoding. These findings suggested that the rate of
learning to read in English was more than twice as slow as in the other orthographies.'
Therefore, it is seen that the development of the reading skills of a learner depends on
the type of orthography being used for the language. Apart from this aspect, certain
other important factors that come into play in the selection or modification of an
orthography are discussed in the next section.
5.3 Orthography in multilingual education programmes

The orthography or the writing system of a particular language plays an important role in the overall success of a multilingual education programme. As has been pointed out in Section 1.2, the goal of MLE is to enable the learners to acquire basic literacy skills through their mother tongue. In this process, along with the speaking and listening skills, it focuses on developing the reading and writing skills of the learners through their mother tongue. Early and effective development of these two skills can take the learners a long way towards forming a strong basis of literacy skills, which can be later transferred to the reading and writing of other languages and subjects. This is possible because we learn to read and write only once in a lifetime. Specifically, such sub-skills of the reading method as reading from left to right, or establishing the sound-symbol correspondences are learnt by the learners only once in a lifetime. This is learnt best if these skills are acquired through a language in which the learner gets the maximum exposure.

In order to give the learners a strong basis in literary skills in the mother tongue, MLE programmes put a great deal of emphasis on producing an abundance of reading and writing materials for them. All these materials need to be produced in their mother tongue. At the same time, it is also important that the study materials are written using a practical orthographic system. The study materials should offer the easiest opportunity to the learners to make use of their prior knowledge in terms of their language, such as the pronunciation, meaning, contexts, correspondences etc., so that this knowledge can form a strong basis for their learning experience. The writing system or the orthography plays an important role in this process. As was pointed out in Section 5.2, shallow orthographies should be easier to read using word-recognition processes that involve the phonology of the language. Hence, it is desirable that the orthography used for writing down the language of the community should actually represent the phonology of the learner’s language. This assists the learners to a considerable extent in establishing the sound-symbol correspondences in the written form of the language. In the MLE programme there is a variety of reading materials (Section 2.4.7) which are used to provide a maximum exposure to the learners to understand and practise and to further boost their reading and writing skills later on. This orthographic system is expected to
represent the language of the learners to the optimum level. The MLE programme focuses on developing the cognitive abilities of the young learners by providing them with maximum input in their mother tongue as it is spoken by their parents and themselves in their home domain and also in the social domain. Sometimes this can be an issue of contention, especially for communities with an established orthography. There are instances where the established orthography of a language community is actually based on the dominant variety of the language and thus fails to represent the language of the learners accurately. Such situations represent a challenge to the young learners in learning a lesson or in developing their literacy skills, since the phonology of the learners is underrepresented in the writing system. Therefore, even though the community claims to use an established writing system, such a system needs to be checked for the practical usability for the learners.

5.4 Orthographic situations

This section seeks to narrow down the focus of the discussion to the orthographic situations that are most commonly found amidst the minority language groups all over the world. In this regard, the discussion on orthography in Section 2.3.4 is relevant where four different kinds of orthographic situations that can be found among the indigenous language groups have been listed. In most cases, the prevailing situation needs either a modification of an existing orthography or the designing of a new practical orthography. The following sections set out the reasons behind these endeavours.

One of the main reasons for the orthographic representation of an unwritten language is the need for providing basic literacy skills to the children and adults through their mother tongue. As discussed earlier in Section 1.0, the use of the mother tongue can bring about a considerable improvement in the overall educational situation (which often seems to be not encouraging otherwise) among the children of linguistically disadvantaged groups.

Another rationale for an orthographic representation of a language is the need for written records of all the valuable knowledge base integrated into the language. It has been observed that most of the indigenous communities possess a rich variety of knowledge related to their indigenous culture, tradition, beliefs, histories, traits,
environment, medicinal plants etc. which are usually stored and disseminated orally unless the language is written down. At the same time, it is also true that having orthography does not necessarily mean that the indigenous knowledge of the particular community is being written down. In order to make that happen, somebody has to take up the task and start documenting such invaluable knowledge. There are a number of different ways in which such knowledge can be documented, such audio and video recording, digital archiving etc. But documentation in written form is one of the basic and simple ways to accomplish the task, and this is possible for the community members themselves provided they have someone who can record these in their MT. Therefore, the availability of a practical orthography can help the community to keep a record of their own indigenous knowledge.

Another reason for the need for a written representation of a previously unwritten language is related to the community’s aspiration to establish their own identity. The availability of written literature and material lends status to a community. This is the reason why some communities try to associate themselves with a standard written variety even though that variety does not represent their language accurately. For example, it is a matter of pride for the members of the Singpho community to possess Kachin Jinghpaw literature, even though only a handful of them can actually read and write that version of the language correctly.

Keeping in view the above reasons, the following sections discuss the issue of designing a practical orthography for a community as well as the issue of modifying an existing orthography for a better representation of a particular language.

5.4.1 Designing a new orthography

The task of designing a proper orthography for even a single language group involves a great deal of serious effort from both the community and other quarters such as linguists, government and other stakeholders. Different linguistic and non-linguistic factors play crucial and decisive roles in the process of design and use of a practical orthography. From the linguistic point of view, it is important to carefully investigate the phonology of the language in order to figure out all the phonemes that need to be represented in the orthography. Most of the new orthographies are seen to be phoneme-based and more stable than the phonetic ones (Grenoble & Whaley 2006). Jany (2010)
comments, 'creating a phonemic orthography implies at least a basic phonological analysis preceding its design.' Grimes & Gordon (1980) note that when creating a phonemic orthography, 'linguists know how to do a good job in a short period of time, making sure that all phonemic distinctions get encoded is safe,' while Rehg (2004) cautions that 'faulty phonological analyses give rise to faulty orthographies.'

Once a proper phonological analysis is done, the next important decision to be taken while designing the new orthography is the selection of the script. The selection of the script involves a lot of linguistic as well as non-linguistic factors.

One of the prominent linguistic factors influencing the selection of the script may be the availability of adequate characters to represent all the important phonemes in the language. Even though a particular script does not have all the characters to represent the phonemes in a particular language, it can be adapted. For example, in the Mising orthography, the Roman letters V and C are used to represent vowel sounds.

Social, political and cultural acceptability is another important factor which needs to be taken into consideration while selecting the script. As discussed at the beginning of the chapter, orthography is often considered as a marker of social and political identity for a community. Specifically, the selection of the script may involve a great deal of significance for the community in terms of their ethnic, religious and political affiliation. There have been instances of violent movements over the selection of the script for a particular linguistic group. For example, the selection of the script for the Bodo community in Assam witnessed a political and social turmoil which eventually resulted in the community's decision to use the Devanagari script. Again, in the case of the Rabhas, another important and large indigenous community of Assam, the same problem was faced regarding the choice between the Roman and the Assamese script for writing their literature in the MTB-MLE programme. After a number of discussions among the various stakeholders of the community such as the Rabha Sahitya Sabha and the Rabha Writers Association along with the consultants from the Department of Linguistics of Gauhati University, the community finally decided to use the Assamese script for their language. Therefore, the selection of the script as well as the use of the orthography might sometimes become more of a socio-political issue rather than a linguistic one.
Another important issue on the matter of the choice of script is whether the community wants the orthography to represent the phonology of the dominant variety or whether they want it to reflect their own dialectal peculiarities. This is a very relevant issue for the Singpho community. The genetic and linguistic affiliation of the Singphos establishes them as a member of the greater Jinghpaw fraternity in Kachin. As a dominant group, the Jinghpaws have their own orthography which more or less represents their variety of the language. Understandably, that orthography does not represent all the phonological and grammatical features of the Singphos as it is spoken in Assam. But the Singphos in Assam (with whom the present researcher has worked the most), always take pride in introducing themselves as members of the greater Jinghpaw fraternity and in this regard, they consider the orthography as one of the significant indicators. Therefore, these members of the Singpho community wish to use this orthography even though it does not completely represent their spoken variety.

It is evident from the above discussion that all these pertinent issues need to be resolved or at least resolved to a point where the community agrees to use a particular orthography and script on experimental basis. Another important factor which needs to be considered is the use of a script or orthography which is machine-readable. This implies that the graphemes of the script can be easily available on standard keyboards so that this language can be used in all types of media.

5.4.2 Modifying an existing orthography

In addition to situations where new orthographies are needed, there is another situation that calls for the modification of an existing orthography. But the expression ‘existing orthography’ is itself ambiguous from the point of view of the range of its actual use by the speakers. Such use varies according to the community and situation.

There are a handful of situations where the orthography is used in all types of everyday writing. In many cases, it is found that the orthography is actually used to read and write only religious texts. In some cases, it is also used exclusively in formal narratives or speeches. In such situations, the use of the orthography remains restricted to a limited number of the priestly class and old members of the community. As a result, the younger members of the community do not feel any inclination to learn this orthography.
In another delicate situation, the orthography is hardly used by the speakers of the language because they find it difficult to follow it. This can happen when the orthography is actually designed for a more dominant variety of the language and there are considerable linguistic differences between the two varieties. Yet the language group may claim to use the orthography in order to establish their identity with the dominant variety. Such situations make the task of modifying an existing orthography quite challenging.

There may be different reasons due to which a community might feel the need for the modification of an existing orthography. Some of these are stated below:

- One reason which stands out is that the community has realized that the orthography being used at present actually is inadequate in representing the complete sound inventory of their language. Therefore, it requires certain changes to be made which will make it more representative of their language.

- Another reason might be that due to the sudden change in the social and political status of the language group, it has become imperative for the community to show their affiliation to a particular dominant language group and orthography is one of the most important means of exhibiting that affinity.

- In the present context of electronic media, old orthographies with conventional scripts sometimes become difficult to use in the modern media. Such difficulties may motivate some language groups to consider the modification of their existing orthography.

- Another important reason which is instrumental in the decision to modify an existing orthography is the community’s desire to start mother tongue literacy in order to improve the educational situation among their children. As mentioned above, there are instances where the existing orthography does not adequately represent the speech sounds of the language. As a result, it becomes difficult for the children to follow texts written in that...
orthography. Therefore, it becomes necessary modify that orthography in order to make it more representative of the language of the community.

However, the task of modifying an existing orthography is never easy. There are a number of challenges which makes the process quite difficult and slow. First of all, in most cases, the community does not seem to have a unanimous decision on the modification of the orthography. Separate groups of members of the community offer a variety of reasons for and against certain changes. Apart from the linguistic decisions that need to be taken, such non-linguistic factors as social and political issues also come into play, making the task more challenging. This is where the theoretical and practical reasons for certain changes in the orthography need to be explained to the leaders and other members of the community in an effort to help them to take the right decision on working out a usable orthography for their children.

With this discussion and practical experience accumulated during linguistic fieldwork in the Singpho area of Northeast India as a backdrop, a discussion of the extremely complicated orthographic situation in the Singpho community in Upper Assam is presented below.

5.5 Orthography in Singpho

The orthographic situation of the Singpho community in Upper Assam presents a case of a mixture of interesting linguistic issues combined with a number of non-linguistic issues. In the following sections, the problem will be presented first. This will be followed by an account of the practical steps that were taken as a part of the present

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I would like express my profound gratitude at this point to Dr. Stephen Morey from Centre for Research on Language Diversity in Australia who has been of great help in my understanding of the linguistic issues regarding the complexities in Singpho and Jinghpaw. I was fortunate to have worked under him as a research assistant in his projects on the A comprehensive documentation of the Turung and Singpho languages of Assam(2005-2007) and The Traditional Songs And Poetry Of Upper Assam –A Multifaceted Linguistic and Ethnographic Documentation of the Tangsa, Tai and Singpho Communities in Margherita, Northeast India (2007-2010). During this period, we spent a considerable amount of time together discussing different issues regarding the Singpho orthography and we also worked with some of knowledgeable members of the community in the field. Much of my understanding of these issues has been guided by Dr. Morey.
study, to at least lay down some basic steps to pave the way for future improvement of the orthographic situation in the community.

The orthographic situation in Singpho corresponds to the situation mentioned in Section 2.4.4.3 where the need for modifying the existing orthography due to its inadequate representation of the language was highlighted. My first acquaintance with the Singpho community took place in March 2005 when I visited a number of Singpho villages in Margherita area under Tinsukia district in order to carry out linguistic fieldwork as a research assistant to Dr. Stephen Morey for a project entitled, 'A Comprehensive documentation of the Turung and the Singpho Languages of Assam' which was funded by Endangered Languages Documentation Programme (ELDP)(http://www.hrelp.org) London. In my first visit to the two villages namely, Ingthong and Ketetong in Margherita subdivision, I was told that the Singphos use the Kachin Jinghpaw orthography. I noticed a number of publications in the Kachin at Myanmar in the houses of Singpho families in the villages that I visited. In my subsequent visits to those villages during the next two years, I realized that actually very few Singpho people could read and write the language using the Kachin Jinghpaw orthography. A deeper investigation revealed that the Singpho community in Upper Assam has been using this Jinghpaw orthography which is designed to represent the Jinghpaw language as it is spoken in Myanmar and Burma. Presently, this Jinghpaw variety is used by a majority of speakers in Kachin and Myanmar as the standard form of the language. But there are a number of linguistic differences which can be referred to as dialectal differences between the Jinghpaw and the Singpho variety of the language. Since these differences are not reflected in the orthography, it is difficult for the Singpho speakers to easily follow this. The fact that in spite of the inability of most speakers of the Singpho language to use the Kachin orthography, their to claim to be using it shows the relevance of issues of social, ethnic and political identity in orthography.

For a better understanding of these differences, some of the characteristics of both varieties are discussed in the following sections.

5.5.1 Kachin Jinghpaw orthography
Kachin is originally a Burmese umbrella term for referring to people belonging to various ethnic identities living in the Kachin state of Burma. The Jinghpaws, being the largest ethnic group in the area, are usually referred to as the Kachins. Therefore, the language used by the Jinghpaws is referred to as Kachin Jinghpaw. The Jinghpaw language actually refers to a network of languages used by a number of different groups of people living in the Kachin area of Burma. People belonging to different ethnic groups use this group of languages for everyday communication with a varying degree of mutual intelligibility. Two varieties of this Jinghpaw language have been standardised to some extent.

One of them is Kachin Jinghpaw and the other is Chinese Jingpo. Interestingly, in Pinyin - the Chinese Romanisation – /p/ refers to aspirated /ph/ and /b/ refers to unaspirated /p/. In the same way /t/ refers to aspirated /th/ and /d/ refers to unaspirated /t/ and /c/. That is why the Tai are called Dai in China – the sound of Tai and Dai is exactly the same. So, Jingpo and Jinghpaw are two ways of writing exactly the same language with some dialectal variation.

The Kachin Jinghpaw was reduced to writing in Burma in the late 19th century by Dr. Ola Hanson and Shara Damau Naw in the Roman Script. This variety was mainly used as a medium for the expansion of Biblical teachings and therefore can also be called 'Bible Jinghpaw'. But in the course of time, a good number of literatures got published in this variety. Thus, the variety established itself as a semi-official language in the Kachin state of Burma.

The other variety, namely Chinese Jingpo, which is mainly spoken in the Yunan province of China, became standardised as a result of the efforts of Professor Dai Qing Xia and others since the 1950s.

Some of the salient features of the Jinghpaw orthography are discussed below.

- One striking feature of the Jinghpaw writing system is that it marks the aspirated consonants as diagraphs, with a leading /h/ as in /hp/, /ht/, /hk/. This is a clue to the influence of the Burmese writing system over the Jinghpaw. In Burmese there is a dental fricative /θ/ which is written as /θ/ in Roman script. Therefore, the aspirated stops are written with the leading /h/ as shown above.
Another characteristics of this writing system is that it marks only five vowels, as the low back vowel is written as /aw/ as in /Jinghpaw/. In case of unstressed vowels in sesquisyllabic words such as /mareng/ meaning 'village' it is written with a /a/. Ola Hanson wrote this type of short vowels with a hook (which is technically called a 'breve') above the vowel, as in /märenɡ/. But the modern Jinghpaw script has stopped writing it. The technical problem of putting it into the computer as a superscript character might be a reason for abandoning it. But of late this breve is being reintroduced in a number of publications from the Jinghpaw area that are aimed at teaching the Jinghpaw script to the Singpho children in India.

The Jinghpaw writing system does not mark the final glottal stop which is so frequent in the language. For example, the orthographic representation of the word meaning 'pig' and 'teeth' is the same i.e., /wa/. The most obvious difference between the two is that the word for 'pig' is marked by a final glottal stop and in case of the other this sound is absent. At the same time, it is marked by a long final vowel /a/. But since Kachin Jinghpaw does not mark this final glottal stop, both words are written in the same way, i.e., as /wa/.

Another feature of the Jinghpaw writing system is that it does not mark the tone. One reason for the absence of tone marking may be the less prominent functional load of tone in the language. This makes it possible for the native speakers to disambiguate the meaning of a word by looking at the context of the sentence.

The Jinghpaw language, written with the Kachin script, is a standardised and almost official form that owes its origin in large part to the Christian Churches, particularly the Protestant Churches. Considerable linguistic and dialectal variation has always existed in Kachin state. However, this variation is not reflected in the writings in the Kachin script.

The Jinghpaw language is very rich in sentence final particles. They use a good number of particles as markers of person agreement, tense, aspect etc. But these are very minimally present in Numhpuk Singpho. /ai/ and /sai/ are two of the most frequently
used sentence final particles in Jinghpaw. However, very few instances of the use of these particles by Singpho speakers have been observed.

### 5.5.2 Problem areas

There are some differences between the phonology of Kachin Jinghpaw and its Numhpuk variety. The investigation of Dai and Diehl in 1992 of the phonology of Jingpo in China and Maran 1971 for Jinghpaw in Burma, compared with the findings of Morey 2010 on the phonology of Turung which is a variety of Singpho in Assam clearly shows considerable differences between the two varieties. The consonants of Jinghpaw and Singpho, as shown in Morey 2010, are indicated below.

Table 6: Jinghpaw consonants: (after Dai and Diehl 2003:402)

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Labio-</th>
<th>Front</th>
<th>Apica</th>
<th>Lami</th>
<th>Front</th>
<th>Dorsal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>apical</td>
<td></td>
<td>n-al</td>
<td></td>
<td></td>
<td>dental</td>
</tr>
<tr>
<td>Plosives</td>
<td>unaspirated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aspirated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affricates</td>
<td>unaspirated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>aspirated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>voiceless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voiced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semi-vowels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The phonology of Singpho is different. Preliminary work on Singpho suggests that its phonemes are as shown in Table 7 (Morey 2010). The shaded spaces in Figure 4 are also used in syllable-final positions:
Table 7: Consonant Phonemes in Singpho

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Palatal / affricate</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voiceless unaspirated stops</td>
<td>p</td>
<td>ch [tʃ]</td>
<td>k</td>
<td>(? )</td>
</tr>
<tr>
<td>Voiceless aspirated stops</td>
<td>ph [pʰ]</td>
<td>th [tʰ]</td>
<td></td>
<td>kh [kʰ]</td>
</tr>
<tr>
<td>Voiced</td>
<td>b</td>
<td>d</td>
<td>j [dz]</td>
<td>g</td>
</tr>
<tr>
<td>Nasals</td>
<td>m</td>
<td>ny [n]</td>
<td>ng</td>
<td>h</td>
</tr>
<tr>
<td>Voiceless fricative</td>
<td>s</td>
<td>s, sh</td>
<td>hk</td>
<td></td>
</tr>
<tr>
<td>Semi vowel</td>
<td>w</td>
<td>y [j]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhotic Approximant</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral Approximant</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following figure, adapted from a table prepared by La Raw Maran, lists the initial consonants of Burmese Jinghpaw. This table includes only single consonant initials and is written in Jinghpaw script.

Table 8: Non-vocalic segments in Jingpho (Maran 1971:162-3)

<table>
<thead>
<tr>
<th>Labial</th>
<th>apical</th>
<th>strident</th>
<th>velar</th>
<th>glottic</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>t</td>
<td>chy, ts</td>
<td>k</td>
<td></td>
</tr>
<tr>
<td>hp</td>
<td>ht</td>
<td>s, sh</td>
<td>hk</td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>d</td>
<td>j, z</td>
<td>g</td>
<td>h</td>
</tr>
<tr>
<td>m</td>
<td>n</td>
<td>ng</td>
<td>y</td>
<td>w</td>
</tr>
<tr>
<td>l</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Maran’s table is a little difficult to read. There are some forms in parentheses, especially in the column headed strident, that appear to be alternatives. These have been omitted from this table, as have forms that ought to have been in parentheses.
In table 8 above, it is seen that there are two sets of sounds under the column headed 'strident'. It can be seen that Kachin Jinghpaw distinguishes between these two sets of sounds. But these distinctions are not found dominantly in the speech of the speakers of Numhpuk Singpho. These distinctions are examined below.

- /S/ and /sh/

In Kachin Jinghpaw, the words for ‘eat’ and ‘go’ are pronounced and written as /sha/ and /sa/ respectively. But in Numhpuk Singpho, both are pronounced as /sa/. As a result, any writer from Numhpuk hkawng writes these with considerable inconsistency when trying to write it according to the Kachin Jinghpaw style. In another example, Kachin Jinghpaw distinguishes/shinglet/ meaning ‘tongue’ from /singda/ meaning ‘chest’. But most Numhpuk Singpho speakers pronounce the initial syllable of these two words as /sing/.

In most cases, a handful of Singpho writers know that there are two different initial consonants, /s/ and /sh/ in Kachin Jinghpaw. But since they do not distinguish between these two consonants, they find it difficult to be consistent with the spellings when it comes to writing these two sounds.

- /Chy/ and /ts/

A similar kind of problem is found in the writing of these two consonants. Kachin Jinghpaw distinguishes these two sounds, but this distinction is almost absent in Numhpuk Singpho. Therefore, most of the writers in Numhpuk Singpho are seen writing /ch/ for these two sounds. For example, /maichan/ ‘tail’ or /nchi/ ‘your grandfather’.

- /J/ and /z/

Both these sounds present a similar kind of difficulty for the writers of the Numhpuk Singpho. The Kachin Jinghpaw clearly distinguishes these two sounds.

Another striking difference between the Kachin and the Numhpuk variety of the Jinghpaw language is vowel length. Kachin Jinghpaw does not distinguish
vowel length. But it is prominently noticed in Numhpuk Singpho. The following pair of words illustrate.
(3) /lägan/ ‘to hide’
(4) /lägan/ ‘to jump’

In case of the word meaning ‘to hide’, it is pronounced with a short vowel. However, when it means ‘to jump’, the vowel becomes longer. Therefore, in order to disambiguate the meaning of the two words it is important to mark the vowel length.

Similarly, the following pair of words presents another problem to the writers of the Singpho language.
(5) /chang/ ‘light in weight’
(6) /chang/ ‘black’

In Kachin Jinghpaw, both these words are written differently as /tsang/ and /chyang/ respectively, thereby presenting the difference in the initial consonants of the two words. There is also a clear difference of tone in both the words. But the most prominent and audible difference in the case of the Numhpuk Singpho examples is the vowel length. The word for ‘light in weight’ is pronounced with a long vowel, whereas the one for ‘black’ is pronounced with a short vowel. However, since there is no system of marking this vowel length in Kachin script, it becomes difficult for the Numhpuk Singpho to disambiguate the meanings of the two words.

This presents a perspective on how a native speaker actually perceives the difference between two sounds orthographically represented in similar spelling but referring to different meanings. In the case of these two words, it was found that even the most learned Singpho writer is also of the opinion that the difference is in the vowel length rather than in tone. Therefore, this is always a welcome idea to write what the native speaker would agree to and feel comfortable with.
Another problem area for the concerned varieties is the glottal stop. Kachin Jinghpaw does not mark the word-final glottal stop. In Numphuk Singpho, the glottal stop is a frequent occurrence in speech. For example, the word for both 'tooth' and 'pig' is /wa/. One of the significant differences between the two is the final glottal stop which occurs at the end of the word for 'pig'. In other words, this word should ideally be written as /wa?/. Apart from the glottal stop, there is the difference of tone which, according to Manje La, one of the most learned members of the community, does not matter much as the users can understand the meaning from the context. But if the glottal stop is left unmarked, then it will confuse the readers and the writers.

Following Morey (2010), a table of correspondences between Numphuk Singpho and Jingpho is given below for the syllables /wa/ and /wa?/, as reported in Si Sigyen et al. (1983) and the notes that Hanson (1896) made about tones.

1. The first tone is the natural pitch of the voice, with a slight rising inflection at the end. It may be called the natural tone.
2. The second tone is a bass tone; it may be called the grave tone.
3. The third is a slightly higher tone than the second, being pronounced with an even prolonged sound: it may be called the rising tone.
4. The fourth tone is very short and abrupt; it may be called the abrupt tone.
5. The fifth tone is somewhat higher than the third, and is uttered with more emphasis; it may be called the emphatic tone.

Table 9: Tone correspondences for the syllable /wa/ in Singpho and Jingpho

<table>
<thead>
<tr>
<th>English</th>
<th>Singpho</th>
<th>Jingpho (Si Sigyen et al.)</th>
<th>Jingpho (Hanson)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tooth</td>
<td>waa₁</td>
<td>wa³³</td>
<td>wa³</td>
</tr>
<tr>
<td>father (voc.)</td>
<td>waa⁵</td>
<td>(wa⁵¹)</td>
<td></td>
</tr>
<tr>
<td>return</td>
<td>waa⁴</td>
<td>wa³¹</td>
<td>wa²</td>
</tr>
<tr>
<td>male human</td>
<td></td>
<td>wa³³</td>
<td>wa³</td>
</tr>
<tr>
<td>father</td>
<td>gowaa₁</td>
<td>k̲a³¹ wa³¹</td>
<td>wa³</td>
</tr>
</tbody>
</table>
Palatalization is another area which is the cause of inconsistency for the Singpho writers. This phenomenon of palatalization is quite clear in Jinghpaw. For example, the word for ‘fly’ in Jinghpaw has a clear palatalization in its first syllable and therefore written as /pyen/. But in Numhpuk Singpho this palatalization is much less apparent and therefore the writers often get confused as when to write /y/ and when not. Thus, the word for ‘mind’ or ‘think’ is written in Jinghpaw as /myit/ but in Singpho, most writers write it as /mit/.

Word-initial nasal syllables are another problem area for the Singpho writers. Different word-initial nasal sounds in words like /n-bawn/, /n-pawp/ ‘names of a Singpho caste’ are spelled differently. In Kachin Jinghpaw, these are spelled with /n/ as in /nbawn/, /npawp/. But in Numhpuk Singpho, no consistency is seen in the spelling of these words. These are variously spelled as /Ombon/, /Umbon/, /Mbawn/ or /Ompop/, /Umpop/ etc. This creates a serious problem for the writers in following a clear rule to spell these words correctly. Apart from these examples, there are some other sets of words with initial nasal consonants which also need to be brought under a uniform spelling convention. For example, the following pairs of words may be considered –

(7) ngu [ŋgu] ‘rice’
(8) ngu [ŋu] ‘to say’
(9) nga [ŋa] ‘to exist, have’
(10) nga [ŋga] ‘earth’

In the first pair of words, the word for ‘rice’ is actually pronounced as [ŋgu] and the word for ‘to say’ is pronounced as [ŋu]. In the same way, the next pair of words is pronounced as [ŋa] and [ŋga] respectively. But it can be seen that both the words are spelt the same way. Therefore, in Kachin Jinghpaw, all the nasal syllables are written
with a leading /n/ and with a hyphen where the first segment of the major syllable is /g/. Therefore the word for ‘rice’ is written as /n-gu/ and the word meaning ‘to say’ is written as / ngu/ in Kachin Jinghpaw.

There is another issue of representing two different vowels sounds in writing i.e., the back vowel [o] and the mid low back vowel [a]. Kachin Jinghpaw represents only the mid low back vowel with /aw/. In Numhpuk Singpho, both sounds occur frequently in speech. There is a confusion regarding which spelling convention is to follow in order to represent the sounds. Both sounds have been represented in writing with a high degree of inconsistency. Hence, this is an area that needs to be worked out.

Finally, there is another major problem which needs to be addressed while thinking about the orthography. This is the existence of different word meanings between Kachin Jinghpaw and Singpho. For example the word ‘māsha’ in Kachin Jinghpaw refers to ‘person’ but in Singpho it refers to ‘other people.’ There is also the issue of different spellings for the same word. Thus, the Jinghpaw word for ‘village’ is written as ‘māre’ whereas it is spoken in Singpho as ‘māreng’. If the Singphos eventually decide to follow the exact Jinghpaw writing system, the children will have to face a considerable difficulty in learning all these different lexical items and also the spelling conventions.

It is evident from the problems stated above that there is a necessity for the modifying the existing Kachin orthography in order to make it easier to use and more representative for the Singpho language. However, any move in this direction depends on the opinion and decision of the community members themselves. As was pointed out in Section 1.3, the opinion and aspiration of the community regarding every important step has been kept in view throughout this research. Most of the important decisions and statement of this work been done on the basis of community opinion. At the same time, the researcher has constantly sought to ensure that such decisions are combined with academic insight. Care has always been taken to give enough time for the community members to think and deliberate upon both the community’s aspiration and the academic arguments (in as simplified a form as possible) before taking any important decision for the programme. This is more so in the case of orthography. The need to modify the Kachin Jinghpaw orthography to make it suitable for the use of the young
learners of the community was discussed and debated over and over again before actually taking these steps. The different modifications that have been brought into the existing orthography are discussed in the next section.

5.5.3 Steps for modifying the orthography

Having looked at the various problem areas regarding the difference between Kachin Jinghpaw and Singpho, the following sections will focus on the steps taken to start possible modifications of the orthography in order to make it more user friendly and easy to learn.

The realisation of the need to modify the existing Kachin Jinghpaw orthography for its use by children in Numhpuk Hkawng came as soon as the writers started writing stories for their children under the Singpho MLE programme. As the writers were told to write stories in their own language and to check for inconsistencies and other errors, they could discover that each of them actually wrote the same words differently. Some of these inconsistencies are illustrated in the following examples:14

(11) Grai re kāsun sāta re
     Grai re kōsun sāta re
     Very REAL cold month REAL
     ‘This month is very cold’

(12) ndai sāta gaw kehtet sāta re
    Ndai sāta go kōthet sāta re
    This month TOP hot month REAL
    ‘This month is very hot’

Both examples are taken from a write-up about the Singpho months by Slg. Santinath Gudung of Ketetong, one of the writers for the Singpho MTB-MLE programme. A scrutiny of the terms referring the adjectives ‘hot’ and ‘cold’ will show that even though both words have initial sesquisyllables, these are not being marked in the same way. In the case of ‘cold’ it is marked by a ‘breve’, but in the case of ‘hot’ this

14 Glosses and translation to the Singpho texts have been supplied only to those examples where these have been felt to be necessary.
symbol is absent. Interestingly, both sentences are written by the same writer in the same document.

(13) n-dai sàta hkaang ang, Buddha ni gaw na-wa sang
Ndai sàta hkaañ añ buddhã ni ga na wa sañ
This month middle LOC Buddha PL TOP sacred enter month

‘In the middle of this month, the Buddhists observe the scared period (nawa)’

Sentence (13) is taken from a text written by Slg Gojen Ompop, an elderly but very enthusiastic and prolific Singpho writer. Many of the stories which are currently used as books in the Singpho MT school have been contributed by this writer. In (13), the word for ‘this’ has been written with a hyphenated nasal prefix plus the rest of the word, whereas in (12), the same word is written without this hyphen by Slg Santinath Gudung.

When the writers were told to check each other’s writings, it was difficult for them even though they were among the most known writers of the language. At the same time, they at once felt the need to bring uniformity in the writing conventions. Moreover, the underlying philosophy of an MLE programme which puts maximum emphasis on enabling the children to learn the basic literacy skills in the easiest possible way also makes it imperative to make the orthography as simple as possible to follow.

However, the modification of the orthography proved to be a more complicated process. Apart from the linguistic issues, a number of non-linguistic factors actually came to play a decisive role in the process of modifying the orthography.

The various issues discussed in the preceding sections were presented in a number of meetings with the leaders of the community and other important stakeholders of the programmes like teachers, writers, parents. The discussions were directed at sensitizing the members of the community about the issues and difficulties regarding the orthography. Three different possibilities were mainly discussed –

- A completely new orthography can be designed in order to represent the phonology of the Numhpuk Singpho accurately.
• The existing Kachin Jinghpaw orthography can be retained but with certain modifications in the writing system. These modifications would be aimed at reflecting the dialectal variations of the Numhpuk Singpho while following the principles of the Jinghpaw orthography.

• There will be no modification of the existing orthography since it is important for the Singpho youths to learn to read and write the standard Jinghpaw.

The leaders and other sections of the community had productive interaction among themselves in all the meetings. Different sections put forward a number of arguments in support of respective stands on the issue. Most of the community members ruled out the possibility of designing a completely new orthography. The reason for this view is predominantly socio-political rather than linguistic. First of all, as mentioned earlier, the Singphos are a descendant group of the Kachin Jinghpaws and therefore, they are proud to be identified as a part of the greater Jinghpaw fraternity. Orthography or the written form of the language is one of the most important means of establishing the identity of any language group. The decision of the Singphos to continue to use the Kachin Jinghpaw orthography can be seen as part of their effort to keep their ethnic identity intact. The small population of the community in India also puts them in a disadvantageous position in regard to getting political importance. In comparison, the Jinghpaws is a big community spread all over the world. Therefore, this clarifies the stand of the Singphos regarding their wish to be identified as Jinghpaws and hence their wish to continue with the Jinghpaw orthography.

However, keeping in view the difficulties faced by the Numhpuk Singphos in using the Kachin Jinghpaw orthography effectively, the learned section of the community still felt the need to modify some of the important writing conventions. It was pointed out to the community that the Jinghpaw writing system itself has under constant modification in the last decade or so. There have been a number of specific instances of modification in terms of marking sesquisyllables and nasal syllables in the Jinghpaw writing system which is being used in various parts of the world. For example, in the Hanson (1954) dictionary, the sesquisyllable is marked with a 'breve'. In this dictionary, the symbol 'à' has been described as 'the second vowel in the Kachin alphabet, representing a varying and somewhat suppressed sound which is not used in the word initial position. Another
notable feature of Hanson (1954) is that it does not mark the glottal stop. In the later period, this convention of marking the sesquisyllable was not followed by the writers of the language. A large body of Jinghpaw literature is found where neither the sesquisyllable nor the glottal stop is marked. Example (14) is from a news article published in the Kachin Post on December 13th, 2003 and was re-published on the August 17th, 2011. It may be noted that none of the sesquisyllables is marked in this example.

(14) Mungmasa ngu ai gaw masu magawtara n lang ai baw re lam tsun nga ma ai hpe na wa yu saga ai.

But in another instance, some young teachers of Kachin Jinghpaw who were sent to Assam to teach the children of the Numphuk Singpho, introduced the ‘breve’ to mark the sesquisyllable. The books used by these teachers consist of Jinghpaw texts where the sesquisyllable is marked as ‘ā’ and the glottal stop is marked as ‘q’. Along with these two symbols, the teachers of Kachin Jinghpaw also introduced some diagraphs to mark the tones in the language, as (15) illustrates.

(15) shi âq dúq gāw gālu nná lāgaw kādun lūq ai

Such reform initiatives indicate that it is possible to bring some changes in the Kachin Jinghpaw orthography to make it more representative of the Singpho variety of the language. In fact, these modifications would actually strengthen the confidence of the Numhpuk Singphos in using the Kachin Jinghpaw orthography. At this point it is worth pointing out that Dr. Ola Hanson himself admitted alternative spellings in his dictionary. He cited alternative spellings for lexical items that are common across the whole Jinghpaw area.

Therefore, after a number of formal meetings and informal sessions with the writers, community leaders and other members of the community, it was decided to introduce the following modifications on an experimental basis.
• It was decided to keep the breve as a marker of the sesquisyllables in the language. For example /mareng/ ‘village’ will be written as /máreng/. Similarly, /ganu/ ‘mother’ will be written as /gānu/ etc.

• The vowel length is to be marked with a straight line which is technically called ‘macron’ over the vowel. For example, /lägan/ ‘to jump’ will be written as /lägn/ as against /lägan/ ‘to hide’. In case of the long /i/ sound, the writers preferred to stick to the Jinghpaw tradition of writing it with a preceding /y/ in words like /pyen/ ‘fly’ or /myit/ ‘to think’ etc.

• The glottal stop is to be marked with a /q/. So the word for ‘pig’ will be written as /waq/ as against the /wa/ ‘teeth’.

• It was decided to mark the word-initial nasal sound with a hyphen, where the next major syllable starts with a /g/. This decision follows the convention used by Hanson in his Kachin dictionary. Thus, the word for ‘rice’ will be written as /n-gu/; similarly, the word for ‘earth’ is to be written as /n-ga/, etc.

• Regarding the use of the back vowels, the Numhpuk Singphos decided to use both of them. So the back vowel will be represented as /ø/ and the mid low back vowel will be written as /aw/. For example, the word for ‘tiger’ is to be written as /sårawng/ and the word for ‘head’ is to be written as /bong/.

• Regarding the use of the sounds listed in Figure 3 under the heading ‘strident’, the writers decided to keep using them even though they are not pronounced by most speakers. According to them, their children will eventually be able to learn these sounds once they are taught to use them. In view of the complexity of the situation, it is obviously a bold decision taken by the community. It would be interesting to see how these sounds which are not usually pronounced in the language will be picked up by the children as well as by the teachers. A detailed study of this process would not be possible during the life of the present study.

• Manje la suggested that sentence-final particles like /ai/ and /sai/ should be retained and used. This would give the children the opportunity to find similarities between the Singpho and the Jinghpaw writing systems.
After these modifications were made, the writers have produced a number of story books, song charts, rhymes and other literatures in their own language. These writings were used to check whether these modifications made the reading of the texts comparatively easier than when the Kachin Jinghpaw orthography was used. It was noticed that the readers could indeed read and understand these text with greater ease. However, there is still a great deal of inconsistency in the writings in the use of these modified versions of the orthography. It is understandable that these modifications will take a long time to be fully implemented. Nevertheless, the most important outcome of this change is that it has made the process of writing Singpho a possible task for some of the members of the community who previously lacked confidence in writing something in the language.

The task of modifying an existing orthography presents its own intricacies as has been evidenced in the case of Singpho. The approach to the modification of an existing orthography needs to be different from that of creating a completely new orthography. The experience with Singpho suggests that an existing orthography actually makes it difficult to explore possible ways of bringing accuracy and flexibility to the system due to the influence of predominant conventions. For instance, the decision to continue to use spellings such as /sh/, /chy/ and /ts/ even though they are not pronounced in speech, makes it difficult for the learners to pick up these conventions. However, the obvious reason of these sound segments being representative of Kachin Jinghpaw actually undermines the linguistic and cognitive problems they creates for the learners. At the same time, the presence of an existing orthography also makes certain tasks easier for the linguist, such as setting the phonological parameters for the language.

Another important aspect of modifying an existing orthography is the involvement of the community in the process. It is not practically possible to include everybody in the community in this process. Even so, the process of involvement certainly generates awareness among the learned community members about the issues involving in their language. There are numerous instances where a particular modified orthography has failed to make an impression upon its users and has eventually died.
One of the reasons for this failure is the lack of involvement of the community members in the process.

5.6 Overview

This chapter dealt with the issues and aspects involved in the role of orthography for a literacy programme, with special reference to the Singpho case study. The chapter started with an indication of the benefits and risks of orthography development. This was followed by a detailed discussion on the relation between orthography and literacy. The researcher highlighted the implications of orthography development for an MTB-MLE programme. The latter part of the chapter presented a description and analysis of the Singpho orthography and dealt with its origin, problems encountered and the practical steps taken towards the modification of this orthography.