A new orthography in an unfamiliar script: A case study in participatory engagement strategies

This paper describes a series of workshops in which speakers of two minority languages in Southeast Asia without a written tradition developed orthographies for their languages. Sociolinguistic factors affecting orthography design and acceptability are explained, particularly those motivating script choice, followed by linguistic considerations for orthography development. A discussion of the necessity for community participation in orthography development includes methods for facilitating a participatory orthography development process. Next, a case study of participatory orthography development where two language communities developed their initial orthography proposals with the author’s involvement is presented. As a result of various sociolinguistic factors, both groups of workshop attendants developed an orthography in a script previously unknown to the majority of their language communities. The paper outlines the process used for this, as well as specific strategies for involving language committee members in orthography development. An evaluation of the case study in the light of previous research is given in the conclusion, followed by a discussion of how participatory orthography processes can be applied when working with other language communities, in order to develop orthography proposals that are sociolinguistically acceptable.

Keywords: orthography development; script; participatory methods; language development; minority language communities

Language planning and orthography development

Although the world’s major languages have long-established written literary traditions, many of the world’s smaller language communities do not. Ferguson (1968) lists graphization, the development of a writing system and orthographic conventions, as a
first step in the process of language development. Likewise, Fasold (1984) notes that language planning often first concerns the written use of language. Therefore, the development of an orthography is an early stage in the process of language development for many languages, even though some language communities may not choose to include written language in their language planning. Coulmas (2003) observes that the extent of written communication today is unprecedented. As a result, an increasing number of individuals from preliterate communities choose to encounter and engage with the world of literacy as a gateway to educational opportunities, employment, and to participating fully in the national affairs of their country. Orthography development is the crucial foundation for literacy and as such a key means of achieving these language planning goals. Cooper (1990, 45) defines language planning as ‘deliberate efforts to influence the behaviour of others with respect to the acquisition, structure, or functional allocation of their language codes’. This involves the interdependent activities of status planning and corpus planning. Status planning is the allocation of a particular language to a certain social function, for example, choosing to expand the use of a language for non-formal or formal education. This may result in corpus planning which includes activities such as developing an orthography. Thus, orthography development is part of language planning.

Orthography development plays an important role in language preservation and revitalization. Karan (2006) highlights the dual influences of UNESCO’s Education for All movement and growing interest in preventing the death of minority languages through language development as motivators for orthography development. Fishman (1991), though noting that language shift is caused by a complex network of factors, views the availability of education in the community language as a key factor in reversing the process of language shift. Skutnabb-Kangas (2000) asserts that though the
availability of mother-tongue education in itself cannot prevent language death, a lack of schools teaching using the mother tongue can be a leading cause of language death. Landry and Allard (1992) explain that subtractive bilingualism is often the result of minority language children accessing education only in the majority language. Strong bilingualism and ethnolinguistic vitality, in their view, requires that the minority language be used in as many domains as possible, including in the home and school. Thus, the goals of educational development and language preservation are closely related. Language communities, seeing either or both of these goals as felt needs may choose to undertake the task of orthography development as one of their language development activities.

**The process of orthography development**

Describing the process of acceptance of a new innovation, Cooper (1990) outlines the four stages of awareness, evaluation, proficiency, and usage. In the process of orthography development, the awareness and evaluation stages occur when written language development is first proposed, before there is any mother-tongue literacy in a language community. Rehg (2004) lists four steps along a continuum towards the standardization of written language: illiteracy, pre-literacy, laissez-faire literacy, and standard language. Developing an orthography then is not a single event but a process in the pre-literacy stage. Laissez-faire literacy, where some written materials are published and used, but inconsistency in writing conventions remains, occurs as community members are gaining proficiency in using the orthography. As usage becomes more skilful and frequent by a growing number of language community members, written language moves towards standardization as common conventions are adopted. Progression through these stages over a period of years is common. Karan (2006) notes that the orthography development for the Shona people of Zimbabwe

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occurred over a 38 year time period, with multiple adjustments and revisions. Similarly, Person (2008) documents a series of adjustments to the Bisu orthography that occurred as members of the language community grew in their understanding and use of that writing system.

**Defining script and orthography**

A script, such as Roman, Thai, Cyrillic, and Devanagari, among many others, is a set of symbols used to write language (Unseth 2005). The term script is somewhat synonymous with writing system (Sebba 2007). Scripts are often associated with one or more major languages. In many cases, an already existing script is used to develop a new orthography (Coulmas 2003). The actual usage of a given script, the orthography, is a language specific writing system which either was, is, or is being proposed for regular use by a significant portion of the language’s native speakers (Baker 1997). In the process of orthography development, the specific conventions for using a chosen script to write the features of another language are decided. For example, the government in Thailand encourages minority language communities that are developing new orthographies to use a Thai-based script, though they are free to use other scripts (Benson and Kosonen 2012). Likewise, the Devanagari and Sambhota (Tibetan) scripts have been used by various minority language groups in Nepal and India as the basis for their orthographies (Chamberlain 2008). The process of orthography development requires the community to first choose a script, and then to decide how the symbols in that script will be used to write each sound in their language.

**Orthography and identity: Choosing a script**

Sociocultural identity is based on factors including language, culture, country of origin, and religion (Eira 1998). Joseph (2004) notes that a speaker’s mother tongue itself is a
reflection of their ethnic, religious, or cultural identity, and states that identity formation is a function of language use. Coulmas (2003) observes that writing is a visible and influential part of a language’s identity, noting that the division between the written forms of languages such as Hindi and Urdu is largely a reflection of the interaction between linguistic and religious identity. Because of its close connection to community identity, to be successful, a writing system must be acceptable to the majority of the language community, and most importantly, to the influential leaders in the society (Fasold 1984). The proposed orthography must reflect the community’s identity as they choose to present it in written form (Unseth 2005). This process of shaping an orthography to adequately reflect the community’s identity often involves a series of choices by the language community, and one of the most critical and obvious decisions is the choice of a particular script.

Fishman (1997, 339) underlines the importance of scripts which are ‘not merely tools for written communication; they are treasured, deeply entrenched ethnocultural and ethnoreligious symbols and enactments’. This means that script choice is not neutral; the choice of a particular script can indicate the political, religious, or social identity that the language community wishes to project about themselves (Unseth 2008; 2005) If this expression of identity is ignored, the orthography is unlikely to meet with community acceptance. Cahill (2011, 3) further explores this idea:

An orthography is an expression of a people’s identity. People accept or reject an orthography based on sociolinguistic factors. If a group doesn’t want to use an orthography, it doesn’t matter how linguistically sound it is - they won’t. So “what the people want” is not just one more factor; it is the most critical factor in acceptance of an orthography.

Part of ensuring the acceptability of an orthography, then, is ensuring that the symbols chosen for the orthography convey the social meanings desired by the language
community. How, then, does a language with no previous written tradition choose a script? What motivations might shape the process of reflecting social meaning through the choice of a script? Answering these questions, Unseth (2005) applies and expands upon motivations for language choice outlined by Fasold (1984). He divides a language community’s motivations for choosing a script into four major categories: identification, distance, participation and linguistic considerations; case studies illustrating each of these four factors are outlined below.

(1) Identification and distance

In some cases, the competing demands of identification and distance are reflected in the existence of multiple scripts and orthographies used for the same language. For example, the Patani Malay living in southern Thailand traditionally use an Arabic-based script for religious purposes (Boonlong 2007). However, in a pilot multilingual education program in the formal educational system, the Patani Malay language uses a Thai-based script. Thus, the language is written in two scripts, a traditional script, and one based on the national language that is used primarily for educational purposes. However, because of the sociolinguistic issues represented by script choice, there is continuing discussion among stakeholders regarding the preferred script choice for (Benson and Kosonen 2012). A desire for education and development appears to motivate the use of Thai script, while a desire to maintain ethnic and religious identity may be primary motivators for the use of other scripts to write Patani Malay. Thus, each script represents a different identity-based or practical motivation shaping the orthography development process.

The case of the Hmong language community in Thailand demonstrates a similar interaction of factors in script choice, also resulting in digraphia. Literate Hmong adults in Thailand most often use a Roman-based Hmong script; however, a Thai-script based
Hmong orthography is used in a pilot project where children are first learning to read and write Hmong before learning to read and write in Thai (Tan 2012). In this case, the identification with the national script facilitates broader literacy, and so may be preferred by some members of the Hmong community in Thailand (Unseth 2005). However, the community still desires that its children also learn the longer-used Roman script (K. Dooley, personal communication). The Romanized Hmong script allows Hmong, particularly those who have emigrated from Asia, to maintain their collective identity, as well as to access a wider range of Hmong literature (Enwall 2008; Eira 1998; Unseth 2005). Thus, in the Hmong community, even if the children are literate in the Thai script, the community also desires that these children learn to read the script they recognize as representing their distinct identity. In this case, the desire to both identify through using the national script as well as maintaining separation and distinct ethnic identity has led to the use of two scripts.

Some Mayan communities distance themselves by using glyphs unique to their community to express their identity as distinct from the Spanish-speaking culture (Grenoble and Whaley 2006). In a similar way, some parts of the Hmong community, including a diaspora population in Australia, prefer to use of the indigenous Pahwah Hmong script (Eira 1998). Likewise, after the breakup of the former USSR, Mongolia chose to use Mongolian script alongside the Cyrillic-based Mongolian writing system to assert its national identity as distinct from the previous influence of Russian language and culture (Grivelet 2001). Similarly, during the same period, Turkmenistan moved from a Cyrillic based orthography to a Latin-based script to write the national language (Clement 2008).

(2) Participation:
In other cases, a language group may choose their script to facilitate interaction with an outside community. This motivation may also be somewhat tied to development related motivations, such as access to education. This is seen by the choice of some groups in Africa to use Roman script in order to facilitate access to French (Unseth 2005). Several orthographies in Cambodia, such as those for the Tampuan and the Bunong, are based on the Khmer script, facilitating access to literacy in the national language. External factors may also be involved in the decision to use a regional or national language script. In the case of Cambodia, the government has encouraged the use of Khmer script orthographies for minority languages in the country (Neou Sun 2009).

(3) Linguistic considerations:

Interestingly, Unseth writes little about linguistic factors, treating them basically as a criterion to prevent the choice of a particular script for the development of a language community’s orthography. Coulmas (2009) concludes from other recent studies on script choice that sociolinguistic factors outweigh systemic factors in the choice of a script by a community. However, in his discussion of factors that contribute to good orthographies, Coulmas does note that scripts differ in their suitability to write certain languages, and that some writing systems are better suited to particular language families. The difficulty of writing tonal languages with Roman script is one example Coulmas gives to illustrate the potential linguistic difficulties caused by a particular script choice. Similarly, Eira’s (1998) discussion of the acceptance of the Pahwah Hmong orthography among some Hmong communities includes the fact that the Pahwah orthography represents the Hmong sounds system more accurately than Roman-script based Hmong orthographies. Therefore, though sociolinguistic factors are critical to the acceptance of an orthography, linguistic factors can impact the usability and ease of learning of a new orthography.
Joshi (2010) points out that differences in orthographies contribute to literacy acquisition skills; transparent relationships between phonology and orthography contribute to the ease of acquisition of a new writing system. Though it is true that readers are able to acquire complex orthographies, such as English, a language community with a large number of members that are newly acquiring literacy may be best served by an orthography where phonological and orthographic relationships are relatively transparent.

A phonemic analysis is often a useful starting place creating such a transparent orthography (Karan 2006). Coulmas (1989; 2003) asserts that though an orthography should not merely be a phonemic transcription, the phonemic level is nonetheless a useful beginning point to fulfil the principle of representing the sounds of the language well. Most languages will have considerably fewer phonemes than syllables, and certainly fewer phonemes than words (Sgall 1987); using phonemes as the beginning point of orthography discussion allows for economy, that is, for the smallest number of symbols possible to be included. Booj (1987) states that orthographies do not simply express phoneme-grapheme relationships but also may reflect underlying word-level morphological rules. Thus various levels of phonetic, phonological and morphological information contribute to the output of the orthography. A thorough phonemic analysis considering phonotactics and morphonemic processes will, then, provide insight on what sounds need to be written in the language, allowing for the economy and transparency that allows for successful use of a newly created writing system.

The linguistic analysis that may precede orthography development must not necessarily be detached from the community of speakers, even if it is facilitated by an outside linguist. Karan (2006) notes that mother-tongue perception and intuition is critical in the analytical process: only sound distinctions that can be perceived by native
speakers can be written. Involvement with community members, even at the linguistic analysis stage, is valuable. The input of the linguistic analysis into the orthography is meant to serve the needs of the speakers, not merely to provide a scientific analysis.

**Community participation in orthography development**

According to Kumar (2002), long-lasting and sustainable development requires community participation; language development efforts are no different in this regard. Successful community involvement in the development of the orthography is a prerequisite to later community involvement in educational development. The process of participation itself also empowers the community as people are given new skills and abilities, facilitating their growth as decision makers (Oakley 1991). Shaeffer (1994), describing community participation in educational programs, observes not only cognitive but also psychological growth as people are affirmed in the value of their local knowledge. Thus, the act of participating in the process of orthography development increases the capacity of community members to actively contribute to subsequent aspects of language development.

The participatory model contrasts with the idea of orthography development as a largely scientific process where an outsider, often a linguist, would analyse the sound system of the language, and propose an orthography for the community to use. According to Sebba (2007), this autonomous model views orthography development as a neutral, scientific process concerned with the representation of phonemes in written form. The participatory model views orthographies as a sociocultural process, connected to language use in the context of the community; as mentioned above, this process may include linguistic considerations. These are discussed in the context of the community, and in relationship to their broader goals for orthography development.
**Language committees**

Most language communities consist of many more people than could actively be involved in orthography development, at least in the first stages of the process, which requires the choice of representatives to form a ‘language committee’. This group of people serve as a decision making body on behalf of the language community throughout the process of initial orthography development, and in subsequent testing and implementation phases (Malone 2004). The committee is the most active participant from the language community and may choose to work with outside specialists in linguistics and education to complete the orthography development process. Though an outsider may first suggest the implementation of a language committee, the selection of members and its continuing role occur at the local level. In the language committees known by the author, the community has chosen a mixed group of older, respected village leaders who they consider good speakers of the language, along with some possibly younger but more educated members.

When a language committee is formed, parameters for the orthography development process can also be set. A well-designed orthography workshop or other initial training allows the language committee members to become knowledgeable decision makers and allows them to draw other community members into the orthography development process. The training of the committee members also gives the rest of the community confidence that the orthography matters are in capable hands.

**Orthography workshops**

The formation of a language committee is one participatory method. A basic form of community-based orthography development has been practiced by SIL in several language projects in Asia is holding orthography workshops (cf. Markowski 2009; Bos, Bos and Page 2008; Easton 2007; Malone 2004). Within the language development
process as a language group progresses through the process of standardization, workshops provide a forum to discuss linguistic and sociolinguistic issues and to make initial decisions about the writing system, drawing the community into this process.

**Participatory orthography development in a familiar script**

In some minority language communities, there is a core of educated speakers who are already familiar with the orthographic conventions of the script they will use for their orthography, and who can transition relatively easily into using this script to write their language. These participants can write words and even stories in their language very early on in the process, deciding through this process what conventions from their chosen script they will adopt as their own (Easton 2003).

In Papua New Guinea, an alphabet development workshop process developed by SIL International led to community ownership of the orthographies created, allowing native speakers to make decisions based on their understanding of their language. This workshop format leads language communities to decide on an orthography through a process of writing texts. As they write, particular difficulties are addressed, turning into a springboard for discussion on how to write specific sounds (Easton 2003). For familiar scripts, this approach has proven to be quite effective.

In other cases, however, the workshop participants may not be familiar with the script they would like to use. This occurs when community members have had limited educational opportunities and do not write in any script fluently, when they desire to identify with or differentiate from another language group, or when they would like to access wider technology such as mobile phones or computers. For a participatory community based approach, a workshop will need to be developed which ensures that
the script will not become a hindrance to the workshop attendees’ active participation in making decisions about their orthography.

The challenge of developing a participatory environment for orthography development in an unfamiliar script was faced by the author when facilitating workshops for the Muak S-aak and Meung Yum language communities. The following case study shares the author’s own experiences with these communities in their initial orthography development processes.

**Participatory orthography development in an unfamiliar script: A case study**

Muak S-aak and Meung Yum are both relatively small language communities belonging to the Mon-Khmer language family. Only a small minority of people from these groups have had the opportunity to participate in formal education, and as a result most have limited familiarity with any writing system. Those who have studied are generally literate in the national language, and perhaps in another regional language. Most influential languages in their area have a long literary tradition, using alphasyllabaries, though Roman script is also used to write several other languages of wider communication.

Representatives from both the Muak S-aak and Meung Yum language communities expressed a desire to develop their languages, beginning with the process of orthography development. They both have formed language and literature committees with the goal of working towards mother tongue literacy and literature production. The implementation and continued work of these committees occurs entirely at the local level without the presence of outsiders. Both language communities chose to use Roman script prior to the beginning of the orthography workshop. The choice of Roman script may be rooted in the desire to identify with other influential
minority language communities, and might reflect the prestige of the English, and a desire for children to study it.

In practical terms, however, this decision meant that participants in the orthography development workshops needed to develop an orthography for their language in an unfamiliar script. As a result, the workshop facilitators had to familiarize the participants with the conventions of Roman script, while still aiming to maintain a participatory environment where participants were empowered to make informed decisions how best to write their language. This process was carried out through a series of activities that allowed the participants to gain knowledge about Roman script and about the phonemic structure of their own languages.

Orthography workshop design
Both the Muak S-aak and Meung Yum groups participated separately in a five-day initial orthography workshop in northern Thailand, with the goal to produce an initial orthography proposal, which could then be evaluated by a larger cross-section of community leaders. Each workshop had three facilitators: an outside literacy specialist, and two linguists; in each workshop, one of the linguists was from a related language community. Following the initial workshop, the participants would return to their home communities with the initial proposed orthography in the form of an alphabet book to present in meetings with their respective language committees and other leaders. Both groups were advised to visit as wide a cross-section of the community as possible to ensure that the proposed orthographies were acceptable to the community, confirming that it reflected the desires of the broader community about how its language would look in written form.

Phase I: Initial orthography draft
The first portion of the orthography workshop was designed to develop a set of shared ideas and a metalanguage for later use. On the first morning, the facilitators briefly oriented participants to the need to balance multiple factors when making decisions about their orthography. Some basic principles of orthography design, based largely on Smalley (1964) stated that the orthography should give maximum motivation to the learner, have maximum representation of speech, provide maximum ease of learning and give maximum ease of transfer to languages of wider communication. The discussion of these principles provided a simple framework of five concrete points around which to base the discussion. The participants expressed a strong concern that their orthography be easily used on computers and mobile phones; the modern version of the ‘reproducibility’ principle could be called technological applicability.

The aim for the first three workshop days was the development of an initial alphabet for their language. This started with the participants systematically working through a list of words, pre-chosen by the facilitators to represent each phoneme in the language. Each phoneme was represented through three to five words, and the participants were instructed to write those words in whichever manner they thought correct. The facilitators then led the participants in a discussion of what they had written. If all participants had made a consistent choice in writing a particular phoneme, without violating any phonemic principles, the participants were encouraged to add the grapheme to their alphabet. If there was some variation in grapheme choice, each participant was encouraged to explain his or her choice. With some input from the facilitators, the group then chose a symbol for that particular sound.

The remaining two days of the workshop focused on applying the newly developed orthography to short texts. This allowed the participants and facilitators to determine whether their choices worked well, and whether the orthography was easily
writable. This also provided an opportunity for the group to discuss other orthographic conventions, such as capitalization, punctuation, and word breaks.

At the conclusion of the first workshop, the participants made plans for testing the orthography in the community. The use of Roman script resulted in significant limitations, as very few people in the language community are familiar with that script. Consequently, formal testing of readability was not conducted. However, determining whether community members thought that the initial orthography represented their language well and whether they were motivated to learn to read a Roman-script based orthography was vitally important at this stage.

**Phase II: Implementation of orthography testing**

The records of this community testing were brought to the second orthography workshop, held about a month after the first. The results were discussed, and any needed modifications to the orthography were entered into the alphabet book, followed by the development of a more extensive orthography guide. This bilingual booklet included examples words for each sound along with a national language gloss, and a national language explanation of the orthographic conventions. The participants then continued to practice writing short texts, with facilitators observing any problem areas.

Both the Muak S-aak and Meung Yum groups followed this process, with some variation as described below.

**Using articulatory phonetics to create a metalanguage around spelling**

The Muak S-aak orthography workshop was held first. There were three participants in the first workshop, a young man and a young woman who had completed post-secondary education in the national language, and another young man who had completed basic education. Elders in the community were well informed of the process,
but declined to participate in the workshop itself, with the language committee delegating the task of initial orthography development to the workshop participants. Because of their educational background, the participants had some exposure to very basic ‘school English’, which enabled them to apply Roman script to their language without receiving extensive training. However, they initially had difficulty with elements of their language that differ significantly from English, such as a three way contrast on word-initial bilabial (pʰ, p, b) and alveolar (tʰ, t, d) stops, or the realisation at a place of articulation not found in English, such as palatal stops. In hindsight, it would have been helpful to have given the participants a more concrete introduction to Roman script orthographies for other Mon-Khmer languages, allowing them to observe other conventions for writing sounds more similar to their own.

The participants of both workshops also had difficulty writing word final consonants, particularly final stops which are unreleased, phonetically differing from word initial consonants. Articulatory phonetics was key to helping them write successfully; when the participants had difficulty writing a word-final consonant, they were asked to consider their tongue position as they pronounced the sound. Facilitators often reviewed the relationship between the position of the lips and tongue, and the consonant that corresponds to that sound, such as <p> for closed lips, or <k> if the tongue is at the soft palate.

As the participants gained this awareness, they relied less on facilitator input and learned to use a metalanguage for discussing spelling among themselves. Additionally, this growing knowledge and awareness of their sound system enabled the participants to understand the reasons for each spelling choice, to have ownership of the decision, and to share their reasoning with others in their home area.
Creating confidence through teaching possible writing conventions

The insights gained during the Muak S-aak workshop were applied to the planning and methodology for the Meung Yum workshop six months later, in addition to the modifications in the workshop process described below.

Like the Muak S-aak, the Meung Yum language committee chose Roman script prior to the workshop. They had an even greater challenge, however, than the Muak S-aak group, in that only one native speaker, a young woman who had recently completed tertiary level education and was working as a teacher, had significant exposure to a language written with a Roman alphabet, while the others had only been exposed to alphasyllabaries. Though the other workshop participants, five native male Meung Yum speakers between the ages of 30 and 50 chosen by the language committee, represented a cross-section of community leaders, they had completed only primary school or non-formal basic education taught in a monastery. As a result, the task of writing, even more so in an unfamiliar script, posed a challenge to them.

Because the facilitators knew these factors in advance of the workshop, the methodology was modified and an in-depth orientation to the writing conventions of a related Roman script orthography was presented to the participants. In one sense, this removed part of the role of the language community in choosing symbols for their sounds, and made the workshop somewhat more facilitator driven. However, without this initial instruction, the participants would have been less able to be active participants in the orthography workshop activities. The group likely would have relied more heavily on the one member who was familiar with Roman script, rather than attempting the spelling activities themselves.
Letter tiles as a tool for participatory decision making

Based on experiences from the Muak S-aak workshop, and the unique needs of the Meung Yum team, an additional workshop tool was developed by the author. The participants were given letter tiles with consonant and vowel options, drawn largely from the orthography of a related language. Different colour tiles were used for consonant graphemes and vowel graphemes, and some blank tiles were prepared to allow for additions as workshop participants determined the need to add symbols. Workshop participants, working in small groups, were given one word at a time by the facilitators, being asked to pronounce the word and then use the tiles to spell it. The use of letter tiles had several benefits.

1. Circumventing initial unfamiliarity: Pre-made letter tiles eliminated the need to actually write in an unfamiliar script in the initial stages of the workshop.
2. Collaboration: Rather than one participant recording the input from the group, which would have tended towards the more educated individuals dominating the discussion, all participants were able to work together to select the tiles needed for the word, and to make suggestions.
3. Flexibility: The tiles allowed the participants to easily explore spelling options and make changes as necessary as they discussed among themselves or were given additional input from the facilitators.
4. Raising phonemic awareness: While most of the participants had received their basic education in another language and had at least a rudimentary understanding of phoneme-grapheme correspondences, others needed further instruction in this matter. Because each letter tile represented one discrete phonemic unit, the participants had a visual representation of how each grapheme corresponded to one distinctive sound in their language.
Visualization of grapheme-phoneme correspondences: The letter tiles were particularly helpful when working through grapheme choices, especially for diphthongs. Before diphthongs were addressed, the participants had already chosen graphemes for all of the monophthongs. The facilitators then discussed the concept of diphthongs with the participants, and let them work through the process of combining single vowel graphemes to create digraphs for the diphthongs. The tiles provided a concrete way to illustrate the way in which sounds combine together to form diphthongs and triphthongs.

Lastly, the use of letter tiles was enjoyable. The participants seemed somewhat nervous at the start of the workshop, and as the letter tiles helped to make their task concrete; relaxed expressions came and laughter soon followed. The way in which the tiles facilitated group work also seemed to suit the participants’ learning and work styles well. Though their task was challenging, the participants were able to experience success as they worked together using the tiles.

**Workshop follow-up: Were the results acceptable?**

Only a small representative group from each language community was able to attend the orthography development workshop, so both teams made particular efforts to survey local leaders about the proposed orthography. In both the Muak S-aak and Meung Yum communities, initial responses were positive.

Since the initial orthography development workshops, the Meung Yum were able to present the alphabet book with the proposed orthography with leaders of all of the villages in the committee members’ region, and reported a positive response in each meeting. As for the Muak S-aak, they have developed a set of locally authored stories, and a three-volume series of primers. A Muak S-aak literacy team has formed, and they
have also printed larger quantities of the alphabet book, which sold rapidly after the first printing. Initial literacy awareness workshops have also been well attended, with over 200 participants at the village level. Community leadership has accepted the orthography innovations, preparing the way for broader community use of the orthography and participation in the language development process (Fasold 1984).

**Challenges and lessons learned**
As mentioned earlier, both groups had some difficulty writing final consonants. This was particularly true of stop consonants, which are unreleased in the word-final position in both Meung Yum and Muak S-aak. Some articulatory principles taught by the workshop facilitators helped the participants grow in their phonemic awareness and learn the metalanguage necessary for discussing it.

As expected, the participants with only a primary school level education had the most difficulty with spelling. These participants would likely be viewed as semi-literate in a second or third language, and were unlikely to use their literacy skills on a daily basis. In the follow-up orthography workshop, facilitators led this part of the group through additional phonemic awareness activities. Exercises such as determining the number of phonemes in a spoken word and isolating a single sound within a word seemed to increase the participants’ awareness of phoneme-symbol correspondences. Future workshops should include these types of exercises for participants with a similar educational background much earlier, ideally before the group determines the spellings of words.

**Is participatory orthography development possible in an unfamiliar script?**
The most encouraging lesson learned throughout the process of orthography development in Muak S-aak and Meung Yum is that it is indeed possible to use
participatory techniques to develop an orthography, even in cases where many
participants are unfamiliar with the script that they will be using. Though facilitator
input, particularly relating to linguistic issues and orthography development principles
may be necessary, this interaction can be considered as part of the capacity building
process that enables the community to pursue their language development goals (Oakley
1991; Shaeffer 1994). In process of developing a new orthography for a previously
unwritten language, the experiences of the Muak S-aak and Meung Yum suggest that
the following strategies may be helpful:

(1) Initially, it is helpful to discuss the motivations for their choice of script with the
group. Generally, the need for the orthography to be acceptable to the language
community is the primary motivation for a particular script to be chosen.
External pressures from languages of wider communication or educational
policies might also shape this choice. The group should be able to articulate
and discuss the reasons for choosing one script over another, and the effect that
this choice will have on their language community.

(2) If a script that is unfamiliar to the participants is chosen for sociolinguistic
reasons, it will be necessary to help the group become familiar with that script
before they are asked to make orthography decisions. The most useful approach
is to familiarize the group with the way that their chosen script is used in a
language similar to their own, if such an example is available. This provides the
group with a more informed understanding of their options, as they understand
what symbol-sound combinations have been effectively used in languages with a
similar phonemic inventory to their own. Though this instruction is more
facilitator driven than participatory in nature, it may in fact be necessary to
allow participants to make informed choices and participate fully in the decisions made later in the workshop.

(3) If the script being used is relatively unfamiliar to the learners, it may be wise to postpone complex writing tasks until after the participants have made preliminary orthographic decisions. This may be particularly important for participants with less experience writing in general; if participants need to write new symbols while trying to think of appropriate orthographic choices, the task may prove to be overly complex. The use of letter tiles is one method that allows participants to make choices about the spelling of particular words and sounds, without needing to think about letter formation. Letter formation and writing can be introduced at a later stage, when participants are ready to begin writing short texts. Also, at this later stage, participants can refine the initial orthography proposal based on the additional experience gained using the orthography to write.

(4) Letter tiles are also useful in helping participants handle the symbol-sound correspondences when working with a new script. Though providing the participants with the letter tiles may appear to restrict their creativity by providing them with a set of choices provided by the facilitator, it may in fact allow them to participate in orthography development in a more active way. They may also choose to create new tiles as these are needed.

**Summary and conclusion**

As described in the literature review, key factors for successful orthography development include capacity building through community participation (cf. Shaeffer 1994). Only informed community members are able to make educated decisions about
their future language planning, as they continue to proceed through the stages of laissez-
faire and standardized literacy.

The main insight gained from in this study is that it is possible to incorporate
linguistic insights into a participatory orthography development process without
defaulting to an autonomous orthography. Linguistic awareness develops the skills
needed for the workshop participants to grow as active participants in their orthography
development, and subsequently, their broader language development goals and practical
implementation. Though sociolinguistic factors are critical to community acceptance of
an orthography, linguistic factors make a contribution to successful orthography
development by allowing a transparent, easily learnable system that reflects the
structure of the language to be developed.

It is quite possible for a language community to contribute to the development of
its orthography in an active way, even in cases where community members are working
in a script with which they have little prior experience. This situation may arise as a
language community chooses a script to represent their sociocultural identity (cf.
Unseth 2005; Fasold 1984), that is, to identify with another group, differentiate from
another group, or to participate in broader development. A well-designed orthography
development process allows the community to choose their desired script without being
limited by past literacy experiences, and thus ensures that perhaps the most important
factor in achieving acceptability is respected.

Community participation is needed in order to shape an orthography in a way
that meets the sociocultural, linguistic, and educational needs of the community. In
some cases, the only way to develop is to interact with outside facilitators during this
process. The facilitators’ role is to build capacity in the community by providing the
instruction needed for them to be well informed and active participants in their language
development. In the case of the Muak S-aak and Meung Yum, the explanation of key orthography principles, the demonstration of an orthography in a related language, and the use of letter tiles proved to be helpful.

These training tools enable participants to make informed choices as they actively contribute to the development of their orthography and therefore facilitate the participatory nature of the process. The early experiences of the Muak S-aak and Meung Yum communities in developing their orthographies have both allowed for acceptance in their communities, and have prepared the way for ongoing growth in participation in their future language planning and development activities.

Though the initial results of the workshops were positive, some areas for future research and testing remain. Neither the Muak S-aak nor Meung Yum communities have many members who are familiar with Roman script. In the early stages of the language development process, as the new orthographies are taught more formally in literacy classes, the literacy teams may observe areas of difficulty for possible future testing and revision. If particular aspects of the orthography appear to be difficult to learn to read and write, more formal orthography testing will need to be conducted among the newly literate community members to ensure that the orthographies developed can truly be effectively used by the community members to achieve their educational goals. The results of such orthography testing may then be implemented in future orthography development workshops.

Another potential area for future research is the decision making process for word breaks in a new orthography. At present, both groups tend towards syllable rather than word breaks, perhaps reflecting the significance of the syllable level in their phonological understanding. Continued use and testing of the orthography will demonstrate the strengths and weaknesses of this strategy.
The challenge of word breaks is also related to the suitability of particular writing systems; the syllable as a major analytic unit is clearly reflected in many Asian alphasyllabaries, but not in the segment-based Roman alphabet. Further research into the implications of script choice for different language types would be invaluable to assist language communities in making their script choices in the most informed manner possible.

References


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