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A contrastive study of Thai and Burmese in phonology aspect for Burmese language teaching

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ABSTRACT

This article presents a contrastive analysis of the phonological systems of Thai and Burmese. The study aims to identify the differences between the Burmese and Thai sound systems based on Whitman's (1970) framework, which comprises four stages: description, selection, contrast, and prediction of learner difficulties. The analysis reveals that Burmese has 11 more initial consonant phonemes than Thai, highlighting significant asymmetries in phonemic inventory. Furthermore, while Thai contains a relatively larger number of plain vowels, Burmese categorizes its vowels into three distinct types: oral vowels, nasalized vowels, and glottalized vowels two of which are absent in the Thai phonological system. These unfamiliar vowel categories often lead to confusion among Thai learners, who may misperceive nasalized or glottalized vowels as segments with final consonants. In terms of tonal structure, Burmese employs four tones—low, high, creaky, and killed whereas Thai uses five. Burmese tones, though fewer in number, present particular challenges, especially in distinguishing between the creaky and killed tones. The findings show the importance of instructional strategies that address these phonological gaps. Effective teaching should include minimal pairs, articulatory explanation, and targeted pronunciation materials. In conclusion, this study contributes to developing better ways of teaching Burmese through contrastive phonological analysis.

KEYWORDS

Contrastive analysis, phonological system, Burmese, Thai

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INTRODUCTION

The Burmese language is a prominent member of the Tibeto-Burman language family and serves as the official language of Myanmar. Due to geographic proximity and regional connections, Thailand places a significant emphasis on Burmese language education. At the tertiary level, institutions such as Chiang Mai University and Naresuan University have established dedicated Burmese language departments. Furthermore, the language is widely taught in schools along the Thai-Myanmar border and through various short-term programs offered by other educational establishments.

According to Necibi and Bahi (2015), the most challenging aspect of language acquisition is ensuring accurate pronunciation. Given that it is frequently the first skill students learn, it requires the utmost attention because it serves as the foundation for the acquisition of vocabulary and grammar in the target language. However, the importance of pronunciation extends beyond mere accuracy; it is crucial because it directly impacts intelligibility, overall communication effectiveness, and learners' confidence in real-world interactions (Derwing & Munro, 2015; Levis, 2018). It is quite challenging for Thai students to become proficient in Burmese because the two languages come from entirely different language families. In contrast to the Thai language, which is a member of the Kra-Dai language family, the Burmese language is a member of the Tibeto-Burman language family. As a result, the phonological systems of the two languages are quite distinct from one another. This implies that Thai students will need to make significant adjustments, particularly during the beginning stages of their language study.

In addition, the findings of previous studies have demonstrated that these phonological differences can lead to difficulties with pronunciation that are systematic in nature. A research report on Burmese language errors, for instance, was carried out by students at Chiang Mai University (Panthumin, 2008). The findings of this report revealed that learners frequently make pronunciation errors that are influenced by their native language. Some phonemes in Burmese, such as /m̥/, are more difficult for students to learn compared to sounds that are shared between the two languages. This is because certain phonemes are more difficult to pronounce than others. Therefore, contrastive analysis can be of assistance in identifying potential difficulties associated with the acquisition of the target language. This is because it draws attention to significant phonological differences.

As defined by Fisiak (1981), Contrastive Analysis (CA) is a subfield of linguistics that investigates the similarities and differences between two or more languages by means of language comparison. This is done in order to determine those similarities and differences. It is based on the idea that people who are in the process of learning a language have a tendency to bring components and patterns from their first language (L1) to the language that they wish to learn (L2). This is the foundation of the theory. In proportion to the degree of similarity that exists between the two languages, the process of learning the target language becomes less challenging for students. If, on the other hand, there are more differences between the languages, this can result in an increase in the number of mistakes that are made and difficulties that are encountered when learning the language. However, regions in which the two languages share similar phonological features may contribute to the facilitation of transfer, which in turn may lead to learners acquiring the language more quickly and with cleaner pronunciation. This is because transfer is facilitated by regions in which the two languages share similar phonological features. A phonological comparison between Thai (L1) and Burmese (L2) can therefore reveal difficulties in pronunciation that Thai learners experience. Burmese is the second language from Thailand. Consequently, this can provide information that can be used in the development of Burmese language teaching strategies that are more effective for Thai students.

Objective

To examine the similarities and differences between the phonological systems of Thai and Burmese in order to predict potential learning obstacles and propose recommendations for improving future language instruction.

LITERATURE REVIEW

Contrastive analysis (CA) is important for both teaching languages because it helps us figure out how languages are alike and how they are different. Whitman (1970) suggested a clear and organized way to look at different languages side by side. He said that CA is more than just comparing two languages to see what's different. It should include clear, organized steps to get useful information for teaching languages. Comparing the grammatical and phonological features of different languages helps to show how each language is different, which makes it easier to find problems in the way languages are taught (Lado, 1957). Moreover, Weinreich (1953) also said that people who are learning a second or foreign language can use what they learn from comparing languages to improve their skills. Together, these perspectives suggest that contrastive analysis not only identifies structural differences but also it may lead to learning difficulties, but also enables learners and teachers to develop targeted strategies to address those challenges.

From Endoo (2017) study, "A Comparative Study of Thai and English in Thailand," it was found that comparing the similarities and differences between Thai and English through their linguistic traits makes learning a second language easier. This shows that studying differences between languages has been a strong and well-established area of study in Thailand for a long time. By systematically analyzing phonological and grammatical structures, contrastive research serves as a valuable pedagogical tool to anticipate and diagnose systematic learning difficulties encountered by learners. Few studies, though, have looked at the differences between Thai and other Southeast Asian languages, especially Tibeto-Burman languages like Burmese.

A study was conducted by Methaviriyakul (2021) that compared the phonological system of the Lahu language to that of the Thai language. This study was conducted in the field of studying Thai and Tibeto-Burman languages. According to the findings of the study, it is difficult for people who speak Lahu to learn how to speak Thai because of the significant changes in consonants, vowels, and tones that are involved. According to the findings of the study, incorporating these phonological differences into the classroom atmosphere would be beneficial for both the students and the teachers. These findings lend credence to the hypothesis that the phonological differences between two languages can have a significant impact on the degree of difficulty that learners encounter when attempting to acquire the target language.

The purpose of these studies is to gain an understanding of the challenges that Thai students may face when attempting to learn Burmese. However, Panthumin (2008) discovered in a study titled "An Error Analysis of Burmese Usage by Chiang Mai University

Students" that Thai language learners at the beginner level who are learning Burmese as a second language frequently make mistakes with their pronunciation, particularly when they use phonemes that do not exist in Thai. This was found to be the case. On the other hand, this study focused solely on errors that were made by the individuals who were assigned to the control group.

An investigation into the differences that exist between the phonological systems of Thai and Burmese would, as a consequence, result in a more profound comprehension of the process of language acquisition and would make it possible to anticipate potential difficulties that may be encountered by individuals who are learning a second language. By assisting students in producing sounds that are more closely aligned with the pronunciation characteristics of native speakers, it is possible that these findings could contribute to the development of more effective Burmese language instruction (Panthumin, 2008). This would be a positive development.

A Contrastive Analysis of the Burmese and Thai Languages

The process of comparing two or more language systems in order to determine the similarities and differences that exist between them is referred to as Contrastive Analysis. It is especially helpful to employ this analytical approach when working in the field of language instruction. According to Whitman (1970), the process of contrastive analysis can be broken down into four primary steps, which are as follows:

1. *Description*: A detailed description of the two languages being compared
2. *Selection*: The selection of specific linguistic features from both languages to be compared.
3. *Contrast*: The identification of differences between the selected features of the languages.
4. *Prediction*: The anticipation of learning difficulties or potential problems based on the identified differences between the two languages.

In applying this four-step framework, the study adopts both descriptive and applied linguistic perspectives. The implementation of each stage was carried out with the intention of ensuring inclusive linguistic coverage and pedagogical relevance.

At the description stage, data from Burmese and Thai phonology were compiled using both field-standard references and prior research, including segmental inventories, consonant and vowel tables, and tonal systems. This ensured accuracy and comparability between the two language systems. For example, consonant inventories were based on phonetic transcriptions validated in academic grammar works, while tone systems were analyzed with reference to pitch contours and tonal phonation types.

During the selection process, the characteristics that are known to cause confusion among Thai students of Burmese were given priority. Voiceless nasals, nasalized vowels, and checked tones are all examples of these. In order to determine the criteria for selection,

linguistic distinctiveness and learner error reports from previous studies were taken into consideration.

The contrast step that was chosen in terms of their phonetic and functional characteristics was the contrast step. An examination of the characteristics was carried out with regard to articulation, distribution, and phonotactic behavior. The most important distinctions were visualized through the use of tone plots, vowel charts, and diagrams. A comparison was made between Burmese nasal vowels and Thai oral vowels, especially with regard to the position of the tongue and the airflow through the nasal cavity. Lastly, the prediction phase incorporated both linguistic logic and empirical learner data to forecast potential pronunciation problems. For instance, voiceless nasal phonemes in Burmese were identified as a likely source of difficulty due to their absence in Thai and the articulatory unfamiliarity among Thai speakers.

To summarize the findings that can be derived from the contrastive analysis that was carried out between Thai and Burmese, the following is a summary of the findings: the differentiation of consonant, vowel, and tone systems from comparing the two languages.

1. Consonant System

1.1 Thai Consonant System

Out of the 44 consonant letters that make up the Thai consonant system, representing 21 distinct consonant phonemes. Initial consonants, consonant clusters, and final consonants are the three primary types of consonants that can be distinguished from one another. Here is a description of each type that can be given.

1.1.1 Initial Consonant Phonemes in Thai Language

There are 21 initial consonant phonemes in the Thai language, meaning that all Thai consonant phonemes can occur in initial position. These consonants are characterized by variations in voicing (voiced and voiceless) and aspiration (aspirated and unaspirated).

Table 1: Initial Consonant Phonemes in Thai

Manner of Articulation	Voicing	Place of articulation					
		Bilabial	Labiodental	Alveolar	Palatal	Velar	Glottal
Plosives	Voiceless, unaspirated	/p/ (ป)		/t/ (ต)	/c/ (จ)	/k/ (ก)	/ʔ/ (อ)
	Voiceless, aspirated	/ p^h/ (ผ, พ, ภ)		/t^h/ (ถ, ท, ธ, ฐ, ฑ, ฒ)	/c^h/ (ฉ, ช, ฌ)	/k^h/ (ข, ค, ฆ)	
	Voiced	/b/ (บ)		/d/ (ด, ฎ)			
Nasals	Voiced	/m/ (ม)		/n/ (น, ณ)		/ŋ/ (ง)	
Lateral	Voiced				/l/ (ล, ฬ)		
Flap	Voiced				/r/ (ร)		
Fricatives	Voiceless		/f/ (ฝ, ฟ)	/s/ (ซ, ส, ศ, ษ)			/h/ (ห, ฮ)
Approximant (Semi-vowels)	Voiced	/w/ (ว)			/j/ (ย, ญ)		

Source: Adapted from Naksakul (1998) and Punkhuankhat (1998), as cited in Plaengsorn (2007).

1.1.2 Consonant Cluster in Thai Language

Thai initial consonant clusters consist of 11 phonemic combinations. These clusters are formed with either the trill /r/, the lateral /l/, or the glide /w/ occupying the second element. Specifically, there are five clusters with /r/, four with /l/, and two with /w/. The authentic Thai initial clusters are: /pr/, /pl/, /p^hr/, /p^hl/, /tr/, /kr/, /kl/, /kw/, /k^hr/, /k^hl/, and /k^hw/. In all cases, the primary initial consonant must be voiceless, a phonotactic constraint strictly observed in the Thai language.

Table 2: Thai Consonant Cluster

Initial Consonant	Consonant Cluster		
	r	l	w
/k/	/kr/	/kl/	/kw/
/k^h/	/k^hr/	/k^hl/	/k^hw/
/p/	/pr/	/pl/	
/p^h/	/p^hr/	/p^hl/	
/t/	/tr/		

1.1.3 Final Consonant Phonemes in Thai Language

Thai has eight different final consonant phonemes, which can be put into groups based on their manner of articulation. This group includes the voiceless stops /p/, /t/, and /k/; the voiced nasal sounds /m/, /n/, and /ŋ/; and the semivowels /j/ and /w/. There are differences between these sounds in terms of where and how they are articulated. Thai final consonants are phonemically significant.

Table 3: Final Consonant Phonemes in Thai Language

Manner of Articulation	Point of Articulation			
	Bilabial	Alveolar	Palatal	Velar
Plosives	/p/	/t/		/k/
Nasal	/m/	/n/		/ŋ/
Approximant (semi-vowel)	/w/		/j/	

Source: Adapted from Methaviriyakul (2021)

1.2 The Consonant System of Burmese Language

The Burmese consonant system consists of initial consonants and consonant clusters. Importantly, Burmese does not have final consonants or syllable codas. This means that every syllable in Burmese ends in a vowel or a vowel-related element, such as a nasalized or glottalized vowel, rather than a distinct consonant sound. While the Burmese writing system may include diacritic symbols that resemble final consonants, these are not pronounced as separate consonantal segments in spoken language.

1.2.1 Initial Consonants in Burmese Language

Burmese has a total of 32 initial consonant phonemes, including: /p, pʰ, b, t, tʰ, d, k, kʰ, g, ʔ, tɕ, tɕʰ, dʑ, θ, s, sʰ, z, ʃ, h, m, m̥, n, n̥, ɲ, ɲ̥, ŋ, ŋ̊, l, l̥, w, w̥, j/. All of these phonemes can occur in initial position. They can be categorized according to voicing (voiced and voiceless) and aspiration (aspirated and unaspirated), as shown in the following table.

Table 4: Initial Consonants in Burmese Language

Manner of Articulation	Voicing	Place of Articulator					
		Bilabial	Dental	Alveolar	Palatal	Velar	Glottal
Plosive	Voiceless unaspirated	/p/ (ပ)		/t/ (တ ဋ)		/k/ (က)	/ʔ/ (အ)
	Voiceless aspirated	/pʰ/ (ဖ)		/tʰ/ (ထ ဌ)		/kʰ/ (ခ)	
	Voiced	/b/ (ဘ ဗ)		/d/ (ဒ ဓ ဍ ဎ)		/g/ (ဂ ဃ)	
Affricate	Voiceless unaspirated				/tɕ/ (ကျ ကြ)		
	Voiceless aspirated				/tɕʰ/ (ချ ခြ)		
	Voiced				/dʑ/ (ဂျ)		
Fricative	Voiceless unaspirated		/θ/ (သ)	/s/ (စ)	/ʃ/ (ရှ လျှ)		/h/ (ဟ)
	Voiceless aspirated			/sʰ/ (ဆ)			
	Voiced			/z/ (ဇ ဈ)			
Nasal	Voiced	/m/ (မ)		/n/ (န ဏ)	/ɲ/ (ည ဉ)	/ŋ/ (င)	
	Voiceless	/m̥/ (မ့)		/n̥/ (နှ)	/ɲ̊/ (ညှ ဉှ)	/ŋ̊/ (ငှ)	
Lateral	Voiced			/l/ (လ ဠ)			
	Voiceless			/l̥/ (လ့)			
Glide	Voiced	/w/ (ဝ)			/j/ (ယ ရ)		
	Voiceless	/w̥/ (ဝ့)					

Source: Adapted from Niyomtham (2014).

1.2.2 Consonant Clusters in Burmese Language

In Burmese, consonant clusters occur exclusively in the syllable-onset position. Phonologically, the language possesses 32 distinct two-consonant cluster combinations, each featuring either /j/ or /w/ as the medial element. Although the orthographic system depicts a three-consonant combination (written as *myw*), it is strictly an orthographic representation; in modern spoken Burmese, this form is simplified and realized phonologically as the two-consonant cluster /mw/. Therefore, from a phonological perspective, Burmese initial clusters are limited to two-segment sequences.

Table 5: Consonant Cluster in Burmese Language

Initial Consonant	Consonant Cluster	
	two-consonant clusters	
	j	w
p	pj	pw
p^h	p^{hj}	p^hw
b	bj	bw
l	lj	lw
l̥	lj̥	l̥w
m	mj	mw
m̥	mj̥	m̥w
n		nw
n̥		n̥w
ŋ		ŋw
t		tw
t^h		t^hw
d		dw
k		kw
k^h		k^hw
g		gw
tɕ		tɕw
$tɕ^h$		$tɕ^hw$
dʑ		dʑw
j		jw
θ		θw
s		sw
s^h		s^hw
z		zw
ʃ		ʃw

As shown in the table, consonant clusters involving the medial /w/ can occur with a greater variety of initial consonants than those involving /j/. In fact, the /w/ medial is compatible with almost all initial consonant sounds in Burmese, making it more widely distributed in cluster formation.

1.3 Contrastive Analysis of Consonant System

1.3.1 Contrastive Analysis of Initial Consonants

In terms of initial consonants, Thai has 21 phonemes, while Burmese has 32. Among these, 19 phonemes are shared between the two languages. The remaining consonant phonemes found in Burmese do not exist in Thai. Burmese notably includes several consonant pairs that differ primarily in voicing, such as /n/ vs. /n̥/ and /m/ vs. /m̥/. These pairs share the same place of articulation as their Thai counterparts, but are distinguished by the presence or absence of voicing, a phonemic contrast absent from the Thai consonant system. In addition to these voiceless nasals, there are several other distinct consonant categories in Burmese that do not exist in Thai and cause pronunciation difficulties for Thai speakers. These include voiced sounds such as /g/, /z/, and /dʑ/, as well as fricative and aspirated sounds such as /θ/, /ʃ/, and /sʰ/. This trait, especially the voiceless nasal phonemes along with these unfamiliar voiced and aspirated categories, poses significant pronunciation challenges for Thai learners.

1.3.2 Contrastive Analysis of Consonant Clusters

It can be observed that the phonological structure of consonant clusters in Burmese is relatively more complex than that in Thai. Phonologically, Burmese initial clusters are strictly limited to two-consonant combinations; the apparent three-consonant combination (written as *myw*) exists solely within the orthography and is realized in modern speech as a two-consonant cluster (/mw/). Furthermore, Burmese demonstrates a pervasive distribution of the medial /w/, which can form cluster combinations with almost all initial consonants including the palatal glide /j/ (as heard in words like /jwà/ 'village') with exceptions restricted primarily to /ʔ/, /h/, /ɲ/, /n̥/, /w/, and /w̥/.

2. Vowel System

2.1 Thai Vowel System

The Thai vowel system includes both monophthongs and diphthongs. There are 18 monophthongal vowel phonemes and 3 diphthongal vowel phonemes, totaling 21 vowel phonemes. While traditional Thai grammar includes short diphthongs, modern phonological analyses typically exclude them, as they are marginal, highly restricted in

occurrence, and often found only in onomatopoeic or borrowed words. Thus, only the three primary diphthongs are classified as phonemes. These vowels can be categorized based on tongue height into four levels: high, mid-high, mid-low, and low. The characteristics of each vowel type are described as follows.

Table 6: Thai Vowel Phonemes

Tongue Position	Unrounded		Less Rounded		Rounded	
Tongue Height	Front		Central		Back	
High	/i/	/iː/	/ɯ/	/ɯː/	/u/	/uː/
Mid-high	/e/	/eː/	/ɤ/	/ɤː/	/o/	/oː/
Mid-low	/ɛ/	/ɛː/			/ɔ/	/ɔː/
Low			/a/	/aː/		
Diphthong	/iːa/		/ɯːa/		/uːa/	

Source: Adapted from Punkhuankhat (1998), as cited in Plaengsorn (2007).

2.2 Burmese Vowel System

Burmese has a total of 7 vowel phonemes and one reduced vowel [ə] , which can be categorized into three groups: oral vowels, nasalized vowels, and glottalized vowels. In addition, there is one special vowel phoneme, /aɪ/, which occurs only in the nasalized and glottalized vowel sets. The characteristics of each vowel group are described as follows.

Table 7 shows the basic oral vowels in Burmese, classified by tongue height (high, mid-high, mid-low) and tongue position (front, central, back). These vowels are produced without nasalization or glottal closure and form the main of the Burmese vowel system.

Table 7: Oral Vowel Set in Burmese

Tongue Position	Unrounded	Less Rounded	Rounded
Tongue Height	Front	Central	Back
High	/i/		/u/
Mid	/e/	(ə)	/o/
Low	/ɛ/	/a/	/ɔ/

Source: Adapted from Niyomtham (2014)

Note: *The schwa [ə] is included in Table 7 to provide a comprehensive profile of Burmese oral vowels. However, unlike the seven primary full vowels, it functions strictly as a reduced vowel restricted to unstressed minor syllables and does not maintain an independent phonemic contrast in full syllables.*

Table 8 shows nasalized vowels in Burmese, where air flows through both the mouth and nose. These vowels are marked with "ɴ" and appears in all tongue positions (front, central, back) and heights (high to mid-low). Burmese nasalized vowels are phonemically distinct, meaning they can change word meaning. Thai lacks such vowels, which may cause pronunciation challenges for Thai learners.

Table 8: Nasalized Vowel Set in Burmese

Tongue Position	Unrounded	Less Rounded	Rounded
Tongue Height	Front	Central	Back
High	/ɪɴ/		/ʊɴ/
Mid	/eɪɴ/		/oʊɴ/
Low		/aɴ/	/aʊɴ/
Diphthong		/aɪɴ/	

Source: Adapted from Niyomtham (2014)

Vowels that are glottalized are presented in Table 9. These vowels are characterized by a glottal stop, which is a brief closure at the vocal cords. The sound of these vowels is short and abrupt, and they frequently appear in syllables that are closed. It is possible for glottal vowels to carry distinct tones, particularly the killed tone.

Table 9: Glottalized Vowel Set in Burmese

Tongue Position	Unrounded	Less Rounded	Rounded
Tongue Height	Front	Central	Back
High	/ɪʔ/		/ʊʔ/
Mid	/eɪʔ/		/oʊʔ/
Low	/ɛʔ/	/aʔ/	/aʊʔ/
Diphthong		/aɪʔ/	

Source: Adapted from Niyomtham (2014)

The Burmese vowel system is made up of three separate groups: oral vowels, nasalized vowels, and glottalized vowels. Even though there are not that many basic oral vowels, nasalization and glottalization make the sound more complicated. In addition, there are different vowel types based on the position and height of the tongue, as well as phonetic differences like nasal airflow and glottal closure, which may be a challenge of Thai learners.

3. Tonal System

3.1 Tonal System in Thai Language

Thai has five lexical tones: mid (สามัญ), low (เอก), falling (โท), high (ตรี), and rising (จัตวา). These tonal distinctions play a crucial role in determining word meaning, as each tone can change the semantic value of an otherwise identical syllable. Tones in Thai can be categorized into two types: marked tones and unmarked tones. The unmarked tone, or mid tone, typically appears without any tone mark in orthography. In contrast, the marked tones low, falling, high, and rising are usually indicated by specific tone marks. The pronunciation

of each tone is not solely determined by the tone mark, but also depends on two other phonological factors: consonant class (high, mid, low) and syllable type (live and dead syllables). These interacting features influence the surface realization of tone in Thai speech.

Table 10: Thai Tones

Pitch Level	Tone Notation (Diacritic)				
	Mid (สามัญ)	Low (เอก)	Falling (โท)	High (ตรี)	Rising (จัตวา)
Low		◌̀			
Mid	◌				
High				◌́	
High Falling			◌̂		
Low Rising					◌̌

Source: Adapted from Plaengsorn (2007)

3.2 Tonal System in Burmese Language

Burmese has a total of four tonal phonemes. Three of these tones creaky, low, and high can occur with oral vowels and nasalized vowels, which are typically found in open syllables. The fourth tone, known as the killed tone, occurs in syllables that are closed with a glottal stop (ʔ), which appear in closed syllables. Furthermore, vowel length in Burmese is intrinsically related to the tonal system. Rather than being an independent phonemic contrast, vowel duration is conditioned by the tone; for instance, the creaky and killed tones naturally have a short vowel duration, while the low and high tones are moderately long and long, respectively. Instead, tones are realized phonetically through the interaction of syllable structure, vowel quality, vowel duration, and contextual cues. The following is an overview of these tonal patterns that show an important part of Burmese phonology (Watkins, 2000; Niyomtham, 2014).

Table 11: Burmese Tones

	Open Syllable			Close Syllable			
				Nasal			Stop
Tones	Creaky	Low	High	Creaky	Low	High	Killed
Vowel Length	Short	Moderately Long	Long	Short	Moderately Long	Long	Short
Tone Notation (Diacritic)	◌̰	◌̀	◌́	◌̰	◌̀	◌́	-ʔ

Source: Adapted from Rattanapitak and Panthumin (2015)

3.3 Contrastive Analysis of Tonal Systems

The phonology of tone in Thai depends on the interplay between tone marks (or the absence thereof), the consonant class of the initial consonant (high, mid, or low), and the syllable structure whether it is the live or dead syllable. In contrast, Burmese does not rely on consonant class for tone assignment. Instead, tone is marked by diacritics placed on vowels in open syllables, especially those with oral or nasalized vowels. No tone marking is used in closed syllables that end in glottal stop (/ʔ/). This structural distinction highlights a fundamental difference in how tonal systems operate in the two languages.

There is a surface similarity between certain tones in the Thai language and the Burmese language. As a demonstration, the low tone of Thai may be comparable to the low tone of Burmese, and the high tone of Burmese may be comparable to the mid tone of Thai languages. There is a possibility that the creaky tone of Burmese could be compared to the high tone of Thai. These comparisons, on the other hand, are based solely on phonetic impressions and do not imply that the systems are equivalent in terms of tonal categories. This is because the systems are significantly different in terms of their fundamental structure and the roles they play within their respective phonological systems.

In spite of Burmese being a tonal language, similar to Thai, the realization of its tone is contingent on the context, and it frequently has different pitch contours as a result of the phonological environments that surround it. In particular, this variability presents a challenge for Thai learners of Burmese, particularly when it comes to distinguishing between the killed tone and the creaky tone, which are both short, high pitch level, and phonologically similar variations of the same tone.

3.4 Result of Contrastive Analysis between Thai and Burmese Languages

This section provides a comparative overview of the phonological features of Thai and Burmese, focusing on initial and final consonants, consonant clusters, vowel systems, diphthongs, and tones. The goal is to highlight the major similarities and differences that may affect pronunciation and learning challenges for Thai learners of Burmese. The comparison is summarized in Table 12 below.

Table 12: Summary of Contrastive Analysis between Thai and Burmese Language

Point of Comparison	Thai	Burmese
Language Family	Kra–Dai	Tibeto–Burman
Initial Consonants	21 phonemes	32 phonemes
Consonant Clusters	11 clusters	32 clusters
Final Consonants	8 phonemes	Not present
Monophthongs	18 phonemes	7 phonemes (plus two special sets: nasalized vowels and glottalized vowels)
Diphthongs	3 phonemes	4 phonemes
Tones	5 tones	4 tones

From the table above, it shows the summary that the phonological systems of Thai and Burmese are very different because they come from different language families, Kra–Dai and Tibeto-Burman, respectively. Burmese has 32 initial consonant phonemes, which is 11 more than Thai. Some sounds that are present in Burmese but not in Thai are /g, dʑ, θ, z, sʰ, ʃ, ɲ, m̥, n̥, ɲ̥, ŋ̥, l̥, w̥/. The sound /ɲ/ sounds like the Thai letter /ญ/ [j], but it needs to be nasalized. It is mostly found in Northern Thai dialects, which makes it hard for people who speak other Thai dialects to pronounce.

In the part of the vowel system, it can be observed that Burmese has fewer vowel phonemes than Thai, but it has two extra groups: nasalized vowels and glottalized vowels. This may make it hard for Thai learners to understand. Also, **v**owel length alone is not an independent phonemic contrast in Burmese. Additionally, Burmese operates a set of diphthongs including /aɪ/, /eɪ/, /oʊ/, and /aʊ/ which primarily appear within non-oral vowel environments. Thai, on the other hand, possesses a wider variety of oral diphthongs than Burmese does. For example, Thai has /iːa/, /ɯːa/, and /uːa/, while Burmese does not. This difference in the complexity of the vowels can make it hard for language learners to switch between the two.

In terms of tone, even though Burmese does not have as many tonal categories as Thai, it does have some complexity, especially with the creaky tone and the killed tone, which share remarkable phonetic similarities. In particular, the killed tone and creaky tone are phonetically similar in pitch contour, phonation, and duration (Watkins, 2000, pp. 4–5). This similarity could make it hard for Thai learners to tell the difference between these tones and produce them correctly.

According to the results, people who are learning a second or foreign language are more likely to have trouble pronouncing sounds that do not exist in their first language. For example, Thai students may find it hard to pronounce the voiceless nasal sound /m̥/ in Burmese because it requires a distinct nasal airflow, which is not present in Thai. Thai students often pronounce the word /m̥à/ (which means 'at') as /mà/ instead of /m̥à/, because they do not use enough voiceless nasal airflow. In the same way, learning Burmese vowel systems, especially the special vowel sets, and the tonal system can be confusing

because the killed tone and the creaky tone sound similar, which could lead to pronunciation errors. In order to help students better imitate native pronunciation, teaching methods that focus on Burmese phonemes that are not found in Thai may be more effective.

DISCUSSION

The results of this study support Whitman's (1970) theoretical framework, which suggests that a systematic contrastive analysis can help us predict and understand the problems people have when learning a second language. To use his four-step process, this study has found important phonological differences between Thai and Burmese and predicted how these differences will affect the way Thai students learn Burmese as a second language. It did this using a four-step process: description, selection, contrast, and prediction.

One of the most important things the study found is how positive and negative transfer affect learning a language. Positive transfer happens when the sounds of Thai and Burmese are similar, making it easier to pronounce words correctly and learn them faster. For example, both languages have a lot of the same basic oral vowels and consonants, like /m/, /n/, and /t/. Thai learners do not have a hard time with these sounds because they are already familiar with them. Whitman (1970) and Fisiak (1981) talk about facilitating conditions for language transfer, and these shared segments are a good example of that. They may strengthen existing phonological patterns instead of breaking them. On the other hand, negative transfer is clear when students have trouble with Burmese sounds that are not in Thai, like the voiceless nasals /m̥/, /n̥/, and the glottalized vowels /eɪʔ/, /aʊʔ/, and so on. These sounds often cause interference from the learners' native phonological system, which leads to substitution errors or unnatural pronunciation. This behavior is consistent with the Contrastive Analysis (CA), which argues that structural differences between the L1 and L2 are likely to cause learning difficulty and error due to negative transfer (Lado, 1957; Selinker, 1972).

While the findings of this study align with the traditional CA framework suggesting that structural differences can lead to negative transfer (Lado, 1957) it is crucial to acknowledge the limitations of this approach. Recent scholarship, such as Munro (2018), argues that predicting learner difficulties based solely on structural absence is not always accurate. Munro highlights that the CA Hypothesis often assumes 'learner uniformity' and an 'equal gravity' of errors, which fails to account for individual variability and the actual impact of specific errors on intelligibility. Furthermore, pronunciation challenges are not merely an issue of articulation (how sounds are produced). Perception, the ability to accurately hear and distinguish unfamiliar L2 sounds, plays an equally critical role in language acquisition. Therefore, while contrastive analysis provides a structural baseline for anticipating potential challenges, pedagogical applications must address both perceptual and articulatory training, focusing primarily on those features that most significantly impede effective communication.

In general, the contrastive approach not only helps find places where positive transfer allows for accelerated learning, but it also helps find places where negative transfer is likely

to happen. So, this study shows how useful contrastive analysis can be for teachers as a way to diagnose and suggest changes to the curriculum. Teaching methods should use positively transferred features to help students succeed early on, while systematically working on negatively transferred segments through direct instruction, auditory training, and practice that focuses on articulation.

CONCLUSION

This study of the phonological systems has shown that there are both similarities and differences between the two languages. Both languages are tonal, but their tone systems are different in terms of how many tones there are, and how they are realized phonetically. Thai has five tones, while Burmese has four main tone categories which are characterized by a complex interaction of pitch, duration, and phonation types. There are also differences in the structure and classification of consonants. For example, Burmese has voiceless nasals and lateral sounds, which Thai does not. In addition, it shows that even though some tonal patterns, like the Thai low tone and the Burmese low-level tone, sound similar, they cannot always be directly compared because their acoustic and articulatory features are different. Furthermore, the complexity of Burmese consonant clusters, particularly the pervasive distribution of two-consonant initial combinations, poses a considerable learning challenge for Thai speakers.

When it comes to teaching a language, it is essential to have a thorough understanding of these distinctions. This is especially true when it comes to minimizing transfer errors, which can be caused by interference from the native language, and ensuring that students receive clear and effective pronunciation instruction. It is necessary to conduct additional research, particularly in the fields of experimental phonetics and perceptual studies, in order to better understand these complex phonetic phenomena and to develop pronunciation teaching tools that are more practically applicable.

Suggestions for Teaching Burmese to Thai Learners

When it comes to producing sounds that are not present in their native phonological system, Thai students of Burmese frequently need to overcome obstacles. In this section, we will propose methods of instruction that take into account the distinctive phonological differences that exist between Thai and Burmese. These methods will be based on contrastive analysis.

The results from contrastive analysis showed that instruction for Thai learners of Burmese should prioritize phonemes that are not used in Thai. These include voiceless nasals and approximants like /m̥/, /n̥/, /ɲ̥/, /l̥/, and /w̥/. It is important to draw attention to minimal pairs that show differences between voiced and voiceless segments. Clear articulatory explanations should be given in lessons on how to make voiceless sounds, with a focus on the nasal airflow that is needed during articulation. To build phonological

awareness, the first thing that should be taught are voiced consonants that are easy to recognize. These should then be compared to voiceless consonants. The voiced nasal word /mà/ 'hard' can be paired with the voiceless nasal word /m̥à/ 'at'. However, instruction should begin with voiced consonants that are more familiar, then compare them explicitly to their voiceless counterparts.

It is also important to stress teaching Burmese nasalized vowels and glottalized vowels, which are not present in Thai. Since Thai phonology strictly relies on overt final consonants rather than nasalized and glottalized vowel features, learners may initially lack the phonological framework to accommodate nasalized and glottalized vowel contrasts in Burmese. Once students know these, the two special sets of nasalized and glottalized vowels should be slowly introduced. This step-by-step method helps students better understand the differences in sounds and avoids the confusion that can come from not being familiar with how sounds are articulated. However, particular attention must be taken when transcribing Burmese vowels into Thai, especially for nasalized and glottalized vowels. Such incorrect transcriptions may lead Thai learners to misperceive nasalized or glottalized vowels as having final consonants, resulting in inaccurate articulation that diverges from native Burmese phonology. For instance, the vowel /eɪɴ/ should be transcribed as "เอ่ง์" (with a silent marker on the final consonant) rather than "เอ่ย" in Burmese nasalized vowels teaching. Although the latter "เอ่ย" may be easier for Thai learners to pronounce because it conforms more closely to familiar Thai phonotactics, it is different from the original Burmese articulation.

In Burmese, nasalized and glottalized vowels in closed syllables are typically unreleased or terminated by a weak or full glottal stop, rather than followed by overt final consonants. This feature is especially true of killed-tone syllables, in which the vowel is abruptly cut off by a full glottal closure. Thai learners may misinterpret this as requiring a final /k/ or /ʔ/, resulting in unnatural and non-native-like pronunciation. Clear auditory modeling and controlled listening exercises are therefore essential to support the correct phonetic targets.

Teaching complex Burmese tones, such as the killed and creaky tones, should also include listening and sound comparison techniques to help students accurately distinguish and pronounce these tones and understand their phonetic differences. For Thai learners, these two tones may sound nearly identical and are sometimes perceived as the same tone; therefore, detailed instruction on their phonetic realization is essential at the start of instruction. Furthermore, because the killed tone in Burmese is only associated with closed syllables, emphasizing this tonal-syllabic relationship can help learners distinguish and have a better understanding of the differences between these tones. To demonstrate these phonemic contrasts, instructors can apply a contrastive minimal pair matrix that explicitly pairs the creaky tone (nasalized) contrary to the killed tone (glottalized):

Table 13: Examples of Contrastive Minimal Pairs (Creaky and Killed Tones)

Phonetic Environment (Onset Type)	Creaky Tone Dimension	Killed Tone Dimension
Bilabial Plosive Onset	ပန့် /paɴ̰/ 'pump'	ပတ် /paʔ/ 'to turn around'
Alveolar Plosive Onset	တုံ့ /toʊɴ̰/ 'to respond'	တုတ် /toʊʔ/ 'fat'
Alveolar Lateral Approximant Onset	လန့် /laɴ̰/ 'frightened'	လတ် /laʔ/ 'fresh'
Palatal Affricate Onset	ကျိုင့် /tɕaɪɴ̰/ 'to shrink'	ကြိုက် /tɕaɪʔ/ 'to like'
Velar Plosive Onset	ကန့် /kaɴ̰/ 'to restrict'	ကပ် /kaʔ/ 'stick to'

In conclusion, the development of instructional strategies that center on contrasting the tonal, consonant, and vowel systems of the two languages, along with the implementation of specific pronunciation exercises, can be of assistance to students who are having difficulty communicating their pronunciation. Students will be able to improve their pronunciation and achieve articulation that is similar to that of a native speaker if they concentrate on phonemes that are not currently present in Thai.

Limitations and Suggestions for Future Research

Within the scope of this study, only segmental and suprasegmental phonology are considered. It is recommended that future research incorporate acoustic analyses and perceptual experiments to evaluate the intensity of training and the rankings of difficulties. Additionally, the investigation of morphophonological and orthographic effects, which may also have an effect on phonological transfer or interference, may lead to improvements in instructional design. During the process of language acquisition, the linguistic levels frequently intersect with one another; therefore, excluding them could potentially limit the findings' ability to be applied in a comprehensive manner. Furthermore, it is hoped that this study will serve as a foundation for additional research that will investigate other linguistic aspects that overlap between the two languages. It is possible that the insights gained from this phonological comparison could also be used to develop more effective instructional materials and curriculum designs that are tailored specifically for Thai students who are learning Burmese. This would help bridge the gap between theoretical understanding and practical application.

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REFERENCES

Derwing, T. M., & Munro, M. J. (2015). *Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research*. John Benjamins Publishing Company.

Endoo, P. (2017). *Kan sueksa priabthiab phasa thai lae phasa angkrit nai prathet thai* [A contrastive study of Thai and English in Thailand]. *Journal of Humanities and Social Sciences, Mahasarakham University, 36*(6), 157–168.

Fisiak, J. (1981). *Contrastive linguistics and the language teacher*. Pergamon Press

Levis, J. M. (2018). *Intelligibility, oral communication, and the teaching of pronunciation*. Cambridge University Press. https://doi.org/10.1017/9781108241564

Lado, R. (1957). Linguistics across cultures: Applied linguistics and language teachers. University of Michigan Press, Ann Arbor.

Methaviriyakul, W. (2021). *Kan wikhro priaptang rabop siang khong phasa lahu kap phasa thai* [A contrastive phonological analysis of Lahu and Thai sound systems]. *Journal of Humanities and Social Sciences, 13*(1), 191-211.

Munro, M. J. (2018). How well can we predict second language learners' pronunciation difficulties?. *The CATESOL Journal*, *30*(1), 267-281.

Necibi, K., & Bahi, H. (2015). A statistical-based decision for Arabic pronunciation assessment. *International Journal of Speech Technology, 18*, 37-44. https://doi.org/10.1007/s10772-014-9248-2

Niyomtham, W. (2014). *Satthasat phasa phama* [Phonetics of Burmese language]. Burmese Language Learning Development Center, Faculty of Humanities, Naresuan University.

Panthumin, U. (2008). *Kan wikhro kho phit phlat nai kan chai phasa phama khong naksueksa mahawitthayalai chiang mai* [An error analysis of Burmese language use by Chiang Mai University students] [Research report]. Chiang Mai University.

Plaengsorn, R. (2007). Kan prayuk lakkan khu thiap siang nai kan son phasa thai kae phu rian chao tang prathet [The application of minimal pair principles in teaching Thai to foreign learners].*Journal of Humanities Review, 29*(1), 33–46.

Rattanapitak, A., & Panthumin, U. (2015). *Waiyakon phasa phama* [Burmese grammar]. Department of Eastern Languages, Faculty of Humanities, Chiang Mai University.

Selinker, L. (1972). Interlanguage. *IRAL; International Review of Applied Linguistics in Language Teaching, 10*, 209–231.

Watkins, J. (2000). Notes on creaky and killed tone in Burmese. *SOAS Working Papers in Linguistics and Phonetics*, *10*, 139–149.
Weinreich, U. (1953). *Languages in contact: Findings and problems*. Linguistic Circle of New York.
Whitman, R. L. (1970). Contrastive analysis: Problems and procedures. *Language Learning, 20*(2), 191–197. https://doi.org/10.1111/j.1467-1770.1970.tb00476.x

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