A Study on Nasalization Errors Made by Manipuri Students Learning Korean

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Abstract

The study examines the nasalization errors made by Manipuri students learning Korean through pronunciation test. The study mainly focuses on the errors made in the nasalization of obstruents. The aspects of the errors include omission, incomplete application of rules and pronunciation by spelling. The results of the test reveal that 56.87% of the students committed errors in the nasalization of obstruents in Korean. The sources of errors can be identified as i) non correspondence between spelling and pronunciation and ii) differences in the phonological rules. This study will benefit the students to focus on the areas where errors are predominant and also help the language educators in designing an effective pronunciation teaching plan.

Key words: Korean nasalization; pronunciation errors; pholonogical rules; Meiteilon speakers.

Introduction

Correct pronunciation enhances listening skills, enabling learners to engage in a meaningful conversation. Despite grammatical errors, correct pronunciation enables us to grasp the intended meaning. Consequently, pronunciation plays a key role in effective communication and serves as a vital factor in assessing learners' language proficiency.

It is to note that every language has its own vowel and consonant systems, which differentiates them with other languages. Meiteilon has 15 native consonant phonemes, which are categorized into Stops /p, pʰ, t, tʰ, k, kʰ/, nasals /m, n, ŋ /, Fricatives /s, h/, affricate /tʃ / and approximants /l, w, j/ (Khan, 2002), while Korean has 19 consonants, which are categorized as stops /p, t, k, pʰ, tʰ, kʰ, p⋆,t⋆,k⋆/, affricates /tɕ,tɕʰ,tɕ⋆/, fricatives /s, s⋆,

h/, nasals /m, n, ŋ/ and laterals /l/(Shin, Kiaer & Cha, 2013). Here, (○⋆) indicates a tense consonant. Thus, we can assume that these differences in the phonemic inventories of both the languages are likely to create problems for the Manipuri learners while pronouncing Korean words correctly.

Furthermore, aside from errors arising from differences in phonemes, there is another crucial factor contributing to the mispronunciation of Korean words by language learners. As noted by Shin et al (2013), native speakers acquire the phonological rules of their language naturally, while foreign language learners must actively learn and understand the constraints governing pronunciation and phonological rules. Consequently, it can be hypothesized that Manipuri learners of Korean, especially Meiteilon speakers (hereafter MLK) are prone to pronunciation errors due to the distinct phonological rules in each language and also due to non correspondence between spelling and pronunciation. Therefore, in order to pronounce Korean words accurately, it is essential to understand the phonological rules of the language and failure to do so will likely result in pronunciation errors.

Previous studies done by Sohn (1999), Kim and Yoe (2010), Jeong and Kim (2011) etc, on pronunciation inaccuracies in Korean have noted the importance of understanding phonological variations in the proper pronunciation of Korean words. Researchers like Jeong & Kim (2011), Wang (2022) and Widyadevi, Herniwati, Ansas and Azizah (2021) deal with the nasalization phenomenon in Korean. Wang (2022) and Jeong & Kim (2011) found that Chinese learners commit pronunciation errors due to the differences in the phonemic inventories and also due to the differences in the phonological rules between Korean and Chinese. Widyadevi et al. (2021), found that Indonesian learners commit errors due to various factors like, TOPIK (Test of Proficiency in Korean), knowledge of nasalization theory, knowledge of vocabulary tested etc.

Based on my personal experiences of learning Korean, I have faced difficulties in acquiring the correct pronunciation of Korean words and committed errors in realising the process of consonant assimilation especially nasalization. Therefore, this study aims to examine whether Manipuri students also encounter similar type of errors if this is the case, which forms of obstruent nasalization the students tend to commit errors the most and find the factors that cause these errors.

As we have discussed the aim and objectives of the study, outlined the key hypotheses, and provided a brief review of relevant literature in the previous section, we will now delve into the fundamental rules of Korean phonology, which are essential for understanding nasalization in Korean language.

Korean Sound Change Rules

Neutralisation

In Korean, only seven sounds [p, t, k, m, n, ŋ and l] can exist in the syllable-final position (Sohn 1999, Shin et al 2013). Even though these sounds restrictedly could exist in the syllable-final position they are never released due to neutralization. All 'released' sounds are replaced with unreleased sounds which share a similar place of articulation i.e. (/p/, /ph/, /p⋆/)→ [p], (/t/, /th/, /t⋆/, /tɕ/, /tɕh/, /tɕ⋆/, /s/, /s⋆/, /h/)→[t] and (/k/, /kh/, /k⋆/)→[k] (Shin et al. 2013, p.181).

Double Consonant Simplification

There are no consonant clusters in Korean. However, in the writing convention, Korean orthography allows double consonants in the syllable-final position though only one of the sounds is fully realized in pronunciation i.e. (/ks/, /lk/)→[k], (/ntɕ/, /nh/)→[n], (/lp/, /ls/, /lth/, /lh/)→ [l], /lm/→[m] and (/lph/, /ps/)→[p] (Shin et al, 2013,p.183). Having introduced the basic rules which are essential for understanding nasalization in Korean, we now move on to the main focus to the paper i.e. nasalization.

Nasalization

Korean consonant nasalization can be divided into three types i) obstruent nasalization ii) liquid nasalization and iii) the combination of both obstruent and liquid nasalization. This paper mainly focuses on the nasalization of obstruents.

Nasalization of Obstruents

In Korean, if a syllable final sound /p/ or /t/ or /k/ (including the consonants realised as [p], [t] and [k] in the syllable final position as mentioned earlier), is followed either by a nasal /n/ or /m/, regressive assimilation takes place and the /p/ is pronounced as [m], [t] as /n/ and /k/ as [ŋ]. It is illustrated with the help of examples given below.

a. /ipmɑn/ →[immɑn] (a bite)

b. /tʌsmun/ →[tʌnmun] (outer door)

c. /ilknɯn/→[iŋnɯn] (reading)

Based on the aforementioned background, this study aims to answer the following questions:

1. Do Manipuri students commit errors in the nasalization of obstruents?

2. What are the patterns of errors in the nasalized pronunciation among Manipuri learners? and

3. What are the factors that cause these errors?

Methdodology

This study employs contrastive analysis and error analysis to determine possible factors that may create learning difficulties for Meiteilon speakers in relation to Korean phonology. In this study, I have conducted a pronunciation experiment on Manipuri learners to identify the patterns and types of errors committed in the nasalization of obstruents. This study employs a hybrid approach, combining both quantitative and qualitative methods. It describes and explains the data about the realisation of consonant nasalization by 17 undergraduate Manipuri students who are learning Korean at Manipur University during 2023–2024 academic years, all of whom have prior knowledge of Korean nasalization. 30 words are selected (5 words each for each sound combination) for the test. The word lists for the test were taken from 'Yonsei Korean reading 4' book and " 한국어의 표기와 발음" *(Korean pronunciation and spelling)* book (Park, 2012). The data collection was conducted by using text reading and recordings and the targeted words were transcribed to analyze the errors.

A quiet room was set up for conducting the recordings. Before the pronunciation experiment, students were given time to review the words. Their voices were recorded using a mobile phone, and the resulting audio files were analyzed for pronunciation errors. If the pronunciation was incorrect even once, it was treated as an incorrect answer.

Results and Findings

The result of the pronunciation test reveals that out of the three divisions of obstruent nasalizations, maximum number of errors occur in the

nasalization of /k/ with 59.41% error, followed by the nasalization of /t/ with 57.65% and the minimum number of error in the nasalization of /p/ with 53.53% error with overall error percentage of 56.87%.

The remainder of this section will provide a detailed discussion of the error patterns and types of errors made by MLK in the nasalization of /p/, /t/, and /k/.

Error in the Nasalization of /p/

Table 1. Error in the nasalization of /p/.

Sound sequence	word	Standard pronunciation	Students' prounciation	Deviation	No. Of errors (n)/17 *100	% of errors	Overall % of error
p+m	sipman (ten thousand)	simman	*[sipman]	m→p (P.S.)	9 (52.94%)		53.53%
	ipmas (taste)	immat	*[ipmat]	m→ p (p.s)	10 58.82%		
	ʌpmu (task)	ʌmmu	*[ʌpmu/ opmu]	m→ p (P.S.)	10 58.82%	57.65%	
	aphmʌli (fringe)	ammʌri	* [apmori]	m→ p (I.A.)	8 (47.06%)		
	kapsman (price only)	kamman	* [kapman]	m→ p (I.A.)	12 (70.59%)		
p+n	kamsahapnita~ kamsahamnia (thank you)	kamsamnida~ kamsahamnia	[kamsamnida]	No deviatiom	0		
	tɕapnun (catching)	tɕamnun	* [tɕapnen]	m→p (P.S.)	10 58.82%	49.41%	
	ʌpsnun (non existing)	ʌmnun	*[ʌpnen]	m→p (I.A.)	10 58.82 %		
	aphnal (future days)	amnal	* [apnal]	m→p (I.A.)	9 52.94 %		
	ulphnun (reciting)	ummun	* [epnen]	m→p (I.A)	13 76.47 %		

Note: The data show that students substitute the Korean vowels /ʌ/ with /o/, /ɑ/ with /a/, and /ɯ/ with /ə/. However, these vowel errors are neglected in this paper, as the primary attention is on the consonant sequences involving obstruents and nasals. ★[….] indicates erroneous pronunciation.

The table 1. shows the percentge of errors in the nasalization of /p/. In the pronunciation of words which have a combination of /p/+/m/, the students commit 57.65% errors while 49.41% errors are committed in the combination of /p/+/n/. Therefore the overall percentage of error comitted by the students in the nasalization of /p/ is 53.53%.

The above data illustrates that the learners commit two types of errors in the nasalization of /p/. They are

i. Pronunciation by spelling (P.S.) and

ii. Incomplete application of rule (I.A.)

Pronunciation by spelling constitute 22.94% (39/170★100) of the error while 30.58% (52/170★100) of the errors are due to the incomplete application of rules. As discussed earlier, Korean allows only one sound in the coda position and if there are two consonants in the coda position, they are represented with a single sound. In the above given word /ɯlphnɯn/, which is pronounced as [ɯmnɯn], there are two consonants /l/ and /ph/ in the coda position. Here, the students only changed the consonant /ph/ to its realized sound [p], without further nasalizing the /p/ sound. Consequently, the students committed error by pronouncing the word /ɯlphnɯn/ as ★[əpnən] instead of [ɯmnɯn].

According to Sarangthem, Laishram & Madhubala (2014), no consonant cluster is found in the final position in Meiteilon. Furthermore, there are no such rules operating in Manipuri phonology, where /p/ changes to /m/ when followed by a nasal. For example, in the word /lapna/ [lapna] (far), /p/ remains unchanged and it is pronounced distinctly as [lapna]. Comparing the rules of both the languages, we can see a huge gap, which may be one of the reasons for the pronunciation errors.

An interessting observation can also be made from the test, i.e.despite the application of same nasalization rule (/p/ becomes /m/ when followed by a nasal), none of the students committed errors in pronouncing the phrase /kɑmsɑhɑpnitɑ/ [kɑmsɑhɑmnidɑ], meaning 'thank you'.

The reason may be due to the fact that the growing popularity of Korean culture in Manipur, driven by the Hallyu wave including K-pop, dramas, films, and food has significantly influenced the youths, who often adopt Korean fashion, makeup, and language. As noted by Reimeingam (2015), social media further enhances this cultural exposure, leading many young Manipuris to incorporate Korean words into daily conversation. Interestingly, some can speak basic Korean phrases, such as *'saranghe'* and *'kamsahamnida',* learned from media even before formal language study. This frequent exposure to such expressions, particularly *'kamsahamnida',* has led to the accurate pronunciation among learners.

Error in the nasalization of /t/

The following table shows the pronunciation errors committed by the MLK while pronouncing the words which undergo nasalizaton of /t/.

Table 2. Error in the nasalization of /t/

Sound sequence	words	Standard pronunciation	Students prounciation	Deviation	No. Of errors (n)/17*100		%of error	Overall %
t+m	matmjʌnɯli (Daughter-in-law)	manmjʌnɯri	*[matmjʌnɯri]	m→t (P.S.)	11 (64.71%)		60%	57.65%
	kʌdzismal (lies)	kʌdzinmal	*[kodzitmal]	m→t (I.A.)	10 (58.82%)			
	k*otɕhman (flower only)	konman	*[kotman]	m→ t (I.A.)	8 (47.06%)			
	nathmal (word)	nanmal	*[natmal]	n→t (I.A.)	9 (52.94%)			
	kʌthmosɯp (Outer appearence)	kʌnmosɯp	*[kotmosəp]	n→t (I.A.)	13 (76.47%)			
t+n	tontɕisnal (Winter solstice)	tondzinnal	*[tondzitnal]	n→t (I.A.)	9 (52.94%)		55.3%	
	tatnɯn (closing)	tannɯn	*[tatnən]	n→t (P.S.)	7 (41.18%)			
	j snal (earlier days)	j nnal	*[jetnal]	n→t (I.A.)	11 (64.71%)			
	nohnɯn (Placing)	nonnɯn	*[nonən]	n→ ommission	8 (47.06%)	76.47%		
			*[nohnən]	n→h (P.S.)	5 (29.41%)			
	is*nɯn (having)	innɯn	*[itnən]	n→t (I.A.)	7 (41.18%)			

136

The table above shows the percentage of errors in the nasalization of /t/. In the pronunciation of words which have a combination of /t/+/m/, 60% errors are committed by the students while 55.3% errors are committed in the combination of /t/+/n/. Therefore the overall percentage of error committed by the students in the nasalization of /t/ is 57.65%.

The above data reveals that the learners commit three types of errors in the nasalization of /t/. They are

i. Pronunciation by spelling

ii. Incomplete application of rules and

iii. Ommission

Errors due to Pronunciation by spelling in the /t/ nasalization, account for 13.53% (23/170*100) of the errors, while 39.41% (67/170*100) of errors result from incomplete application of rules, and 4.71% (8/170*100) are due to omission. For instance, in the word /kʌthmosɯp/ [kʌtmosɯp]→[kʌnmosɯp~kʌmmosɯp] (outer appearance), the aspirated alveolar stop /tʰ/ in the coda position is pronounced as /t/ due to neutralization, and /t/ is then nasalized, pronounces as [n]. Since this rule does not exist in Meiteilon, many students commit errors due to the incomplete application of rules.

One of the striking pattern of errors that appear in the nasalization of /t/ is the pronounciation of /nohnɯn/ [nonnɯn]. Here, the students commit two different types of errors i) sound ommision and ii) pronunciation by spelling. In the first type, the /h/ sound in the coda position which must be changed to /n/, is omitted and is pronounced as [*nonən]. It may be due to the fact that according to Choi (2015) and Lee, Madigan and Park (2016) the verb stem final /h/ is silent when followed by a vowel as in /nohɑjo/ [noɑjo] (put down) and /tɕohajo/ [tɕoɑjo] (to be good). Moreover, when [h] is placed in the syllable final position but not at word initial position, it may be deleted depending on the formality of the speech situation as in /mihon/ [mion / mihon] (Lee et al, 2016). Therefore the students misapprehend the rule and committed error. And in the second type, the word /nohnɯn/ is pronounced as it is spelled as [*nohnən]. In case of /nohnɯn/ [nonnɯn] (placing), the students simply pronounced the word as it is spelled without applying nasalization rule. However, in Meiteilon, /h/ is never omiited or silent between voiced sounds as seen in

'mahi' [məhi] (liquid) and malhei [malhəi] (appricot). Moreover, the /h/ sound is pronounced distinctly in Meiteilon. Additionally, /h/ never occurs in the coda position Meiteilon. Thus, owing to the differences between the two languages, the students misinterpreted the rule and pronounced the word according to its spelling.

Error in the nasalization of /k/

Table 4. Error in the nasalization of /k/

Sound sequence	word	Standard pronunciation	Students' prounciation	Deviation	No. Of errors (n)/17*100	% of error	Overall %
k+m	kukmin (citizen)	kuɲmin	*[kukmin]	ŋ→k (P.S.)	9 (52.94%)		
	tɕokakmul (sculptor)	tɕoaaɲmul	*[tɕokakmul]	ŋ→k (P.S.)	16 (94.12%)		
	sikmul (plant)	siŋmul	*[sikmul]	ŋ→k (P.S.)	10 (58.82%)	64.71%	
	puʌkhmun (Kitchen door)	puʌɲmun	*[puokmun]	ŋ→k (I.A.)	9 (52.94%)		
	haŋkukmal (Korean language)	haŋguɲmal	*[hankukmal]	ŋ→k (I.A.)	11 (64.71%)		59.42%
k+n	ilknɯn (reading)	iɲnɯn	*[iknɯn]	ŋ→k (I.A.)	9 (52.94%)		
	nak*nɯn (fishing)	naɲnɯn	*[naknɯn]	ŋ→k (I.A.)	7 (41.18%)		
	tak*nɯn (rubbing)	taɲnɯn	*[taknɯn]	ŋ→k (I.A.)	10 (58.82%)	54.12%	
	mʌknɯn (eating)	mʌɲnɯn	*[moknɯn]	ŋ→k (P.S.)	9 (52.94%)		
	pɑlknɯn (brightening)	paɲnɯn	*[paknɯn]	ŋ→k (I.A.)	11 (64.71%)		

The table above shows the percentage of errors in the nasalization of /k/. In the pronunciation of words which have a combination of /k/+/m/, the students commit 64.71% errrors while 54.12% errors are committed in the combination of /k/+/n/. Therefore, the overall percentage of error committed by the students in the nasalization of /k/ is 59.42%.

The above data illustrates that the learners commit two types of errors in the nasalization of /k/. They are

i. Pronunciation by spelling

ii. Incomplete application of rule and

Pronunciation by spelling constitute 25.88% (44/170★100) of the total errors while 33.53% (57/170★100) of the errors are due to the incomplete application of rules. As previously mentioned, in Korean, when a velar stop /k/ precedes a nasal, it changes to the velar nasal [ŋ], which shares the same place of articulation. This can be observed in examples like /tɕokɑkmul/ [tɕogɑŋmul], /hɑnkukmɑl/ [hɑnguŋmɑl], and /kukmul/ [kuŋmul], among others. However, in Meiteilon, when /k/ is followed by a nasal, it remains unchanged and is pronounced distinctly. For example, in the word /tʃakniba/ [tʃakniba] (beggar), /k/ is not nasalized and is pronounced as [tʃakniba] . Unlike Korean, /k/ in Meiteilon doesnot undergo nasalization when followed by a nasal sound. Consequntly, many stydents committed errors by pronouncing them as they are spelled. Furthermore, there is also the error of incomplete application of the rule i.e. applying only one rule when more than one phonological rule should be applied. Words like /nɑk★nɯn/, /ilknɯn/, /pɑlknɯn/ etc, are pronounced as [nɑŋnuɯn], [iŋnɯn], [pɑŋnɯn] respectively, by undergoing two phonological processes (neutralization followed by nasalization or double consonanat simplification followed by nasalization). However the students pronounced them as [naknən],[iknən] and [paknən] without further undergoing the nasalization rule.

Factors Contributing to Errors in the Nasalization of Obstruents
The results of the experiment indicate that several factors contribute to errors in the nasalization of obstruents. These factors are as follows:

Influence of Spelling on Pronunciation (Native Language Influence)
There is a spelling and pronunciation correspondence in Meiteilon (Lisham, 2013). However, Korean lacks correspondence between spelling

and pronunciation (Sohn 1999, Choo and O' Grady, 2003, Shin et al 2013, Lee et al. 2016). Since the relationship between spelling and pronunciation is more complex in Korean than Meiteilon, it is not easy for Meiteilon speakers to realize how a written Korean word should be pronounced or, how a word they have heard should be written. Moreover, Meiteilon speakers presume that in Korean, a letter is assigned to each sound which must be articulated like the spelling system of their native language.

Non–Mastery of Phonological Rules

As mentioned earlier, mastering the phonological rule is one of the important factors for an accurate pronunciation. MLK commit errors in the pronunciation of words which undergo a different phonological rule which is different from that of their native language or which does not occur in their native language. Since, Korean and Meiteilon are two distinct languages with different phonological rules, many students commit errors due to these differences. Particularly, students apply the rules incompletely or omit the sounds while pronouncing Korean words.

Conclusion

The result of the study shows that 56.87% of the errors committed in the nasalization of obstruents. The students commit maximum number of errors in the pronunciation of words that undergo nasalization of /k/ with 59.42% error, followed by nasalization of /t/ with 57.65% error and minimum in the nasalization of /p/ with 53.53% error. Most of the errors are committed due to incomplete application of rules constituting 34.5% (30.58%+39.41%+33.53%/3) of the error, pronunciation by spelling 20.78% (22.94%+13.53%+25.88%/3) and omission 1.57% (0%+4.7%+0%/3). Thus, the results of the experiment show that the explaination provided by the hypothesis is both reasonable and valid. Therefore, we can conclude that MLK commit error in the nsalization of obstruents and the chief factors that cause the students to commit errors are non correspondence between spelling and pronunciation and non–mastery of phonological rules. In conclusion, it is hoped that this study will benefit the students to focus on the areas where errors are predominant and also help the language educators in designing an effective pronunciation teaching plan.

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