

ISCKMC 2020
International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»

**A QUESTION ON PHONETIC TRANSCRIPTION OF
VIETNAMESE**

Nguyen Hanh Phan (a)*
*Corresponding author

(a) Peoples' Friendship University of Russia, 6, Miklukho-Maklayas St., Moscow, 117198, Russia,
hanhpn.ru@gmail.com

Abstract

The system of sounds of tonal languages still attracts the attention of linguists all over the world. The study and description of the sound structure of these languages is often carried out using phonetic transcription. For languages such as Vietnamese, whose sound system is still not fully understood, the issue of phonetic transcription is unresolved. Phonetic transcription has been widely used to depict speech sounds in Vietnamese since the early 20th century. In works on Vietnamese language, we can see different transcription systems by different authors. The description of the phonetic transcription of Vietnamese is influenced by various factors. It is generally accepted that there are four main pronunciation options in Vietnamese. Among them, the literary standard version contains the most sounds and tones. This article is devoted to the question of describing Vietnamese language transcription system based on the research material of Vietnamese and international linguists. The article provides a comparative analysis of various methods of recording the system of sounds of Vietnamese language offered by Vietnamese speakers around the world, examines the main difficulties in the transcription of Vietnamese language, identifies the main factors that influence the description of phonetic transcription of Vietnamese, and also describes in detail the features of the structure of Vietnamese. This article uses the characters provided in the International Phonetic Alphabet to transcribe the sounds of speech in Vietnamese language. The main attention is paid to the comparison of different transcription variants of the sound system of Vietnamese language.

2357-1330 © 2021 Published by European Publisher.

Keywords: Transcription, Vietnamese language, phonology, phonetics, linguistics



This is an Open Access article distributed under the terms of the Creative Commons Attribution-Noncommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Today, phonetic transcription plays an important role in scientific and linguistic research. Shcherba (2004) notes that “for linguists, transcription has not only purely practical value in teaching a language, but also a tremendous theoretical value” (p. 32). Transcription is especially important when comparing the sound structure of different languages. In order to identify the similarities and differences in the sound structure of several languages, you need to know how to pronounce words in these languages, since the letter does not always reflect the exact pronunciation of the word. To address this issue, linguists use phonetic transcription. Studies devoted to the description of the phonetics of Vietnamese (Đoàn, 1976; Glebova & Wu, 1963; Gordin & Bystrov, 1984; Kirby, 2011; Mkhitarian, 1959; Ngo, 2001; Nguyen et al., 2016; Nguyễn, 1995; Thompson, 1965), did not lead to an unambiguous solution; the absence of a recognized phonetic system and transcription of Vietnamese language arouses additional interest of scientists.

2. Problem Statement

It is known that there is a difference between written and spoken forms of speech. A special phonetic script is used to depict the exact pronunciation of words in writing. The recording of a sounding speech in phonetic writing is called phonetic transcription (Novospasskaya et al., 2018). As Reformatsky (1996) notes “Phonetic transcription can use any existing alphabet, but with the addition of special characters that are not in the practical alphabet” (p. 79). Vietnamese transcriptions are usually done on the basis of IPA. When describing the sounds of different languages of the world, one may encounter the situation of using several systems of phonetic notation in the works of various researchers (Urtegeshev et al., 2009). This problem is encountered not only in the description of Vietnamese, but also in other languages, including Russian. This question was raised by many scientists, such as Shcherba (2004), Nguyễn (1995).

3. Research Questions

Vietnamese pronunciation varies between regions. For example, in most areas in northern Vietnam, the initial consonants d, gi, r have the same pronunciation. In the literary standard their pronunciation is [z] for d and gi, [ʒ] for r (Đoàn, 1976). In the northern (Hanoi) version their pronunciation is [z] for all three. In the southern version, they can be transcribed as [j] for d and gi, [ɹ], [r] or [z] for r (Alves, 2007; Hoàng, 2009; Nguyễn, 1995). Moreover, the number of sounds also differs in different dialects. Therefore, when compiling a transcription, you need to choose the correct characters for recording one of the options. Difficulties are also caused by the fact that the question of the system of sounds in Vietnamese, i.e. their number has not yet been fully resolved. Disagreement about the quality and quantity of sounds is one of the reasons that led to the variety of existing transcriptions.

4. Purpose of the Study

The purpose of this article is to determine the factors influencing the composition and principles of the phonetic transcription system of Vietnamese language and to compare them to the existing variants of the phonetic transcription system of sounds in Vietnamese nowadays.

5. Research Methods

When performing the tasks presented, the article uses methods of comparison and generalization of materials developed by Vietnamese, English, Russian and other linguists from around the world.

6. Findings

Vietnamese is a syllabic language; there is no inflection in it. A Vietnamese syllable has three main elements: initial, core and tone. The main parts of a syllable are core and tone.

The characteristics of consonants in Vietnamese are determined by their place in a syllable. Only nasal occlusives and corresponding oral deafs can act as finite elements of a syllable (Gordin & Bystrov, 1984).

When found after the rounded monophthongs / u /, / o / and / ɔ /, the back-lingual consonants / ŋ / and / k / were labialized and pronounced as [ŋm] and [kp] (Kirby, 2011).

It is generally accepted that in Vietnamese there are only three diphthongs, otherwise the letters o, u, i, y in vowel combinations are considered semi-vowels.

In syllables, where the core is oi – ui – iu, the first sound is a syllable vowel, and the second plays the role of a semi-consonant ending. In syllables where uy is the nucleus, y is the syllable vowel and u is the medial.

The first step in performing Vietnamese transcription is to determine the pronunciation for the transcription: standard literary or dialectal (including northern, southern, central, or other dialects) (Hoàng, 2009).

See table 1 of sounds below, the pronunciation of which differs by region.

Table 1. Letters and their corresponding sounds in Vietnamese dialects

Letters	Literary Standard	Northern	Central	Southern
initial consonants				
tr	t̚	c	t̚	t̚
q	k	k	k	w
v	v	v	v	j
d – gi	z	z	z/j	j
r	ʒ	z	ʒ	z/z/ʒ
h	h	h	h	h/ɣ
vowels				
a	a	a	a	ã
ê	e	e	e	ɛ
iê – yê	ie	ie	ie	i
uô	uɤ	uɤ	uɤ	u
êu	ew	ew	ew	iw
uơ	uɤ	uɤ	uɤ	uu

final consonants				
t	t	t	t	k
ch	k	k	k	t
n	n	n	n	ŋ
nh	ŋ	ŋ	ŋ	n

As noted above, different sets of transcription signs are used in the works of different authors (Emerich, 2012; Nguyễn, 1995; Nguyen et al., 2016; Pham, 2018; Shimizu, 2014). It can also be noted that a number of authors used different sets of transcription signs in their works in different periods (Brunelle, 2019; Brunelle et al., 2010; Pham, 2008, 2009). This causes certain inconveniences and leads to misunderstanding of the material by the readers. For example, the [a] sign in one work may represent one long vowel sound, while in another work it is used to denote a short vowel sound.

Below, table 2 is listing letters that have different transcription options.

Table 2. Sounds with different transcriptions

Vietnamese letters	Transcription marks
Initial consonants	
B	b ; ʙ
Đ	d ; dʰ
g/gh	g ; ɣ
r	r ; ʀ ; r̥ ; ʀ̥ ; ʁ
s	s̥ ; s̥ʰ ; ʃ
ch	h̥ ; c ; tʃʰ ; tʃ
kh	x ; χ
th	tʰ ; tʰʰ ; tʰʰʰ
tr	t̥ ; t̥ʰ ; t̥ʃ ; t̥ʃʰ
vowels	
a	a ; ã ; aː
ă	ã ; ä̃ ; a ; ə
â	ə̃ ; ɤ̃ ; ʌ
ơ	əː ; ɤ
u	u ; uː
ư	u̯ ; i̯
iê/ia/yê/ya	ie ; iə ; iɤ ; i̯ẽ ; iâ
uơ/ura	uɤ ; iə ; uə
uo/ua	uo ; uə ; uɤ
semi-consonants and final consonants	
u/o	u̯ ; w
i/y	i̯ ; j
nh	ɲ ; ŋ
ch	h̥ ; c ; k
tones	
even tone	1̄ ; 1 ; a1
descending (ˊ)	ᵛ ; 2 ; a2
interrogative (ˋ)	ᵛ̃ ; 3 ; c2
interrogative (ˊ)	ᵛ̃ ; 4 ; c1
ascending (ˊ)	1̇ ; 5 ; b1 ; d1
tones	1̇ ; 6 ; b2 ; d2

Below is a variant of the phonetic transcription proposed by the author of the article (Table 3).

The choice of transcription characters by the author depends on the degree of high frequency of use in modern studies in the field of Vietnamese studies.

Table 3. Phonetic transcription for standard literary version

Letters	Sounds	Examples
initial consonants		
-	ʔ	ăn 'to eat' – [ʔ]ăn, ở 'to live' – [ʔ]ở, ô 'umbrella' – [ʔ]ô
b	ʙ	bà 'grandmother' – [ʙ]à, bầu 'squash' – [ʙ]ầu, bia 'beer' – [ʙ]ia
v	v	vợ 'wife' – [v]ợ, vui 'funny' – [v]ui, vàng 'gold' – [v]àng
đ	ɗ	Đất 'earth' – [ɗ]ất, đầu 'head' – [ɗ]ầu, đưa 'to give' – [ɗ]ưa
x	s	Xem 'to look' – [s]em, xong 'to finish' – [s]ong, xám 'grey' – [s]ám
s	ʃ	Sen 'lotus' – [ʃ]en, sẻ 'sparrow' – [ʃ]ẻ, sáo 'flute' – [ʃ]áo
r	ʐ	Rau 'vegetables' – [ʐ]au, rắn 'snake' – [ʐ]ắn, rửa 'to wash' – [ʐ]ửa
l	l	Làm 'to work' – [l]àm, lưng 'back' – [l]ưng, luộc 'to cook' – [l]uộc
m	m	Mì 'noodles' – [m]ì, muộn 'to be late' – [m]uộn, mới 'new' – [m]ới
n	n	Nóng 'hot' – [n]óng, nước 'water' – [n]ước, ninh 'put out' – [n]inh
h	h	Hồng 'pink' – [h]ồng, hương 'aroma' – [h]ương, hoa 'flower' – [h]oa
ph	f	Phấn 'chalk' – [f]ấn, phúc 'happiness' – [f]úc, phần 'part' – [f]ần
t	t	Tan 'melt' – [t]an, tuyết 'snow' – [t]uyết, tim 'hearts' – [t]im
th	tʰ	Thang 'stairs' – [tʰ]ang, thương 'to love' – [tʰ]ương, thuyền 'boat' – [tʰ]uyền
tr	t̚	Trăng 'moon' – [t̚]ăng, tròn 'round' – [t̚]òn, trắng 'white' – [t̚]ắng
ch	c	Chanh 'lemon' – [c]anh, chua 'sour' – [c]ua, chuẩn 'standard' – [c]uẩn
kh	x	Khô 'dry' – [x]ô, khác 'different' – [x]ác, khung 'frame' – [x]ung
g, gh	ɣ	Ghế 'chair' – [ɣ]ế, gỗ 'wooden' – [ɣ]ỗ, gương 'mirror' – [ɣ]ương
nh	ɲ	Nhanh 'fast' – [ɲ]anh, nhỏ 'little' – [ɲ]ỏ, nhẹ 'light' – [ɲ]ẹ
ng, ngh	ŋ	Người 'human' – [ŋ]ười, nghe 'to listen' – [ŋ]e, ngủ 'to sleep' – [ŋ]ủ
c	k	Cam 'orange' – [k]am, cắn 'bite' – [k]ắn, cầm 'Keep' – [k]ầm
k		Kê 'groats' – [k]ê, kiến 'ant' – [k]iến, kem 'ice cream' – [k]em
q		Quý 'precious' – [k]úy, quên 'to forget' – [k]uên, quyền 'law' – [k]uyền
d	z	Đạo 'walk' – [z]ạo, dứa 'pineapple' – [z]ừa, dễ 'easy' – [z]ễ
gi		Già 'old' – [z]à, giữa 'between' – [z]ữa, giận 'be angry' – [z]ận
Medial		
o, u	W	Hoa 'flower' – h[w]a, chuyển 'transfer' – ch[w]yền, quên 'to forget' – q[w]ên
Vowels		
â	ɤ̃	Chân 'legs' – ch[ɤ̃]n, nhất 'the first' – nh[ɤ̃]t, cầm 'to keep' – c[ɤ̃]m
ơ	ɤ̄	Cơm 'rice' – c[ɤ̄]m, hợp 'suit' – h[ɤ̄]p, lớp 'Group' – l[ɤ̄]p
e	ɛ	Kem 'ice cream' – k[ɛ]m, xem 'to look' – x[ɛ]m, sen 'lotus' – s[ɛ]n
ê	E	Trên 'top' – tr[ɛ]n, mềm 'soft' – m[ɛ]m, xếp 'fold' – x[ɛ]p
ô	O	Ông 'grandfather' – [o]ng, hồng 'pink' – h[o]ng, trống 'empty' – tr[o]ng
u	U	Chung 'common' – ch[u]ng, chút 'Little' – ch[u]t, súp 'soup' – s[u]p
ư	u	Mừng 'congratulate' – m[u]ng, lưng 'back' – l[u]ng, mứt 'jam' – m[u]t
o (-ong, -oc)	ɔ̃	Ong 'bee' – [ɔ̃]ng, trong 'inside' – tr[ɔ̃]ng, óc 'brain' – [ɔ̃]c
o, -oo-	ɔ̄	Tròn 'round' – tr[ɔ̄]n, cọp 'tiger' – c[ɔ̄]p, xoong 'pan' – x[ɔ̄]ng
ã, a (-ay, -au)	ã	Khăn 'scarf' – kh[ã]n, tay 'hand' – t[ã]y, màu 'colour' – m[ã]u
a	A	Lan 'orchid' – l[a]n, hát 'song' – h[a]t, làm 'to work' – l[a]m
a (-anh, -ach)	ɛ̃	Chanh 'lemon' – ch[ɛ̃]nh, khách 'guest' – kh[ɛ̃]ch, nhanh 'fast' – nh[ɛ̃]nh
i, y	I	Tím 'violet' – t[i]m, ý chí 'will' – [i] chí, chính 'main' – ch[i]nh
-iê/-ia/-yê/-ya	iə	Kiểm 'look for' – k[iə]m, kia 'there' – k[iə], quyền 'law' – qu[iə]n, khuya 'night' – khu[iə]
-ươ/-/ua	uə	Trường 'school' – tr[uə]ng, hương 'aroma' – h[uə]ng, cửa 'door' –

		c[ua]
-uô/-ua	uə	Cuộn ‘roll’ – c[ua]n, chuông ‘bell’ – ch[ua]ng, cua ‘crab’ – c[ua]
Finals		
p	P	Lắp ‘install’ – lă[p], cấp ‘level’ – cá[p], kip ‘during’ – ki[p]
t	T	Tắt ‘switch off’ – tá[t], hát ‘to sing’ – há[t], phạt ‘to fine’ – phạ[t]
n	N	Khăn ‘scarf’ – khă[n], muộn ‘to be late’ – muộ[n], chuẩn ‘standard’ – chuẩ[n]
m	M	Làm ‘to work’ – là[m], cấm ‘to ban’ – cá[m], kem ‘ice cream’ – ke[m]
ng, nh	ŋ	Hồng ‘pink’ – hò[ŋ ^m], chung ‘common’ – chu[ŋ ^m], xinh ‘beautiful’ – xi[ŋ]
c, ch	K	Hạc ‘flamingo’ – hạ[k], mắc ‘expensive’ – má[k], sách ‘book’ – sá[k]
o, u	W	Chào ‘to greet’ – chà[w], tàu ‘train’ – tà[w], máu ‘blood’ – má[w]
i, y	J	Hai ‘two’ – ha[j], tay ‘hand’ – ta[j], tai ‘ear’ – ta[j]
Tones		
static tone	1	Hai ‘two’ – [haj ¹], tay ‘hand’ – [tăj ¹], tai ‘ear’ – [taj ¹]
descending (ˊ)	2	Làm ‘to work’ – [lam ²], hồng ‘pink’ – [hoŋ ^{m2}], tàu ‘train’ – [tăw ²]
extra interrogative (ˇ)	3	Ngã ‘to fall’ – [ŋa ³], sẵn ‘in stock’ – [să ³], kẽm ‘zinc’ – [kəm ³]
interrogative (ˋ)	4	Hỏi ‘to ask’ – [hỏi ⁴], xẻng ‘shovel’ – [seŋ ⁴], sảnh ‘lobby’ – [sễŋ ⁴]
ascending (ˊ)	5	Khách ‘guest’ – [xăk ⁵], mắt ‘eyes’ – [măt ⁵], giống ‘similar’ – [zoiŋ ⁵]
heavy (.)	6	Muộn ‘to be late’ – [muən ⁶], mượn ‘get on loan’ – [muən ⁶], kip ‘during’ – [kip ⁶]

7. Conclusion

Phonetic transcription plays an important role in modern linguistics. It is widely used in various linguistic areas: in the study of the system of sounds of a language, in teaching languages, in recording sounding speech, etc.

In the study of Vietnamese, phonetic transcription is used in almost all studies. However, different authors have their own versions of transcriptions, and it is often possible to see that the same symbol is used to describe different sounds, or vice versa, one sound is described by different symbols. To resolve this issue, it is necessary to compare the existing transcription systems of Vietnamese language and create a unified phonetic transcription system.

The task of comparing the existing transcription systems of Vietnamese language is available today, it makes the task of researchers easier and serves as a reference for authors in the research process. It also makes a significant contribution to solving the second problem.

To create a unified phonetic system of transcriptions, you must first fully define the characteristics of Vietnamese sounds, which takes a lot of time to collect materials and compare different pronunciation options in dialects. This task is currently in progress.

References

- Alves, M. J. (2007). A Look at North-Central Vietnamese. In *The 12th Annual Meeting of the Southeast Asian Linguistics Society* (pp. 1–7). Pacific Linguistics, Res. School of Pacific and Asian Stud., The Austral. National Univer.
- Brunelle, M. (2019). *Tone perception in Northern and Southern Vietnamese*. <http://www.sciencedirect.com/science/article/pii/S0095447008000454>
- Brunelle, M., Nguyễn, D. D., & Nguyễn, K. H. (2010). *A Laryngographic and Laryngoscopic Study of Northern Vietnamese Tones*. <https://pubmed.ncbi.nlm.nih.gov/20926914/>

- Đoàn, T. T. (1976). *Ngữ âm tiếng Việt* [Vietnamese phonetics]. Nxb Đh Quốc gia Hà Nội.
- Emerich, G. H. (2012). *The Vietnamese Vowel System*. <https://repository.upenn.edu/edissertations/632>
- Glebova, I. I., & Wu, D. A. (1963). *Basic Vietnamese language course*. Inst. of Int. Relations.
- Gordin, M. V., & Bystrov, I. S. (1984). *Phonetic structure of the Vietnamese language*. Nauka.
- Hoàng, T. C. (2009). *Phương ngữ học tiếng Việt* [Vietnamese dialect]. Nxb Đh Quốc gia Hà Nội.
- Kirby, J. P. (2011). *Illustration of the IPA – Vietnamese (Hanoi Vietnamese)*. <https://doi.org/10.1017/S0025100312000424>
- Mkhitarian, T. T. (1959). *Phonetics of the Vietnamese language*. Publ. house of vostoynoy literature.
- Ngo, N. B. (2001). *The Vietnamese Language Learning Framework – Part One: Linguistics*. <https://www.yumpu.com/s/0vfs5y8lbQWwA254>
- Nguyen, Q. B., Vu, T. T., & Luong, C. M. (2016). *The Effect of Tone Modeling in Vietnamese LVCSR System*. <https://doi.org/10.1016/j.procs.2016.04.046>
- Nguyễn, T. K. (1995). *Giáo trình lịch sử ngữ âm tiếng Việt (sơ thảo)* [Curriculum history of Vietnamese phonetics (draft)]. Hà Nội, Nxb Giáo Dục.
- Novospasskaya, N. V., Perfilieva, N. V., & Lazareva, O. V. (2018). *Modern Russian language – Phonetics*. RUDN.
- Pham, A. H. (2008). The Non-Issue of Dialect in Teaching Vietnamese. *J. of Southeast Asian Lang. Teach.*, 14, 25–37.
- Pham, A. H. (2009). The identity of non-identified sounds: glottal stop, prevocalic /w/ and triphthongs in Vietnamese. *Toronto Working Papers in Linguistics*, 34. <https://twpl.library.utoronto.ca/index.php/twpl/article/view/6803>
- Pham, B. (2018). *Children's acquisition of consonants, semivowels, vowels, and tones in Northern Viet Nam*. <https://researchoutput.csu.edu.au/en/publications/childrens-acquisition-of-consonants-semivowels-vowels-and-tones-i>
- Reformatsky, A. A. (1996). *Introduction to linguistics*. Aspent-Press.
- Shcherba, L. V. (2004). *Language system and speech activity*. URSS.
- Shimizu, M. (2014). *The Distribution of Final Palatals in Vietnamese Dialects*. https://www.academia.edu/9553270/The_Distribution_of_Final_Palatals_in_Vietnamese_Dialects
- Thompson, L. C. (1965). *A vietnamese grammar*. University of Washington Press.
- Urtegeshev, N. S., Selyutina, I. Y., Esenbaeva, G. A., & Dobrinina, A. A. (2009). Phonetic transcriptional standards of UUFT and MFA: correspondence system. *Philol. issues. Ser. Ural-Altai Studies*, 1/UA(1), 100–115.