

Abridged Edition

*Lo's*  
*Complete Romanization*  
*of Chinese*

(LCRC 國語全羅馬化系統)

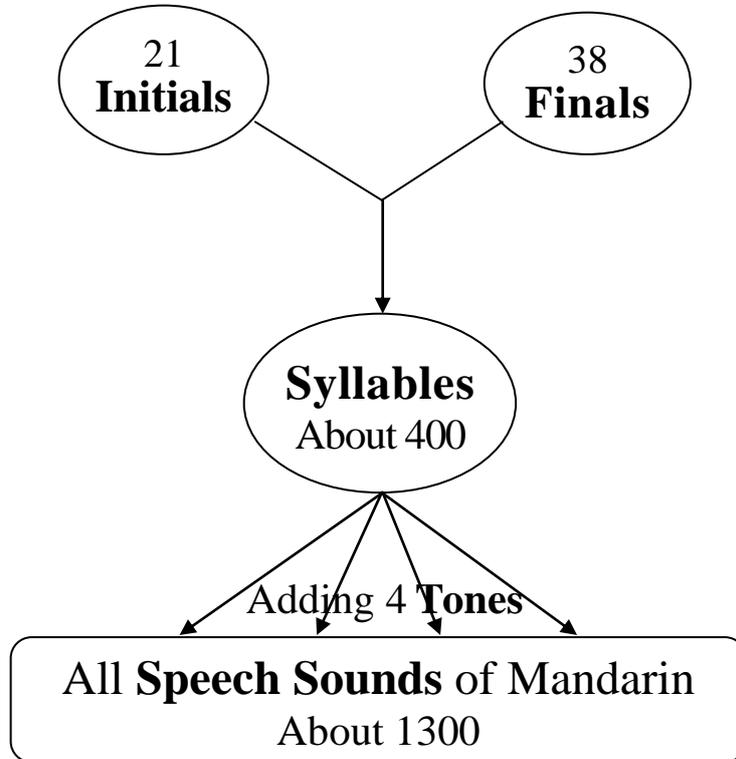
[www.chinesepinyin.net](http://www.chinesepinyin.net)

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# Preliminaries



Mandarin Chinese consists of only about 1300 differentiable **speech sounds**, which are but about 400 **syllables** spoken at various **tones**. All syllables are generated from 21 **initials** (front consonants) and 38 **finals** (structures of 1 to 3 vowels with or without an end consonant) or, to be exact, all syllables are but finals with or without an initial.

The 21 initials are front consonants of the following 21 sounds:

玻坡摸佛得特訥勒哥科喝基欺希知蚩詩日資雌思

The 38 finals are the following 37 sounds plus the final of the sound 東:

啊誒衣喔烏迂鵝兒恩翰哀嘍熬歐安昂呀耶唷  
腰憂雍央烟因英蛙窩歪威彎汪溫翁約冤暈

# Introduction

For decades, learners of Chinese around the world, including all Chinese students in mainland China, but not those in Taiwan, have been using pinyin to indicate the Mandarin pronunciation of Chinese characters. However, because the design of pinyin as a phonetic system is so awkward, it turns out that just the learning of pinyin itself is already a very difficult task. In mainland China, primary school teachers call pinyin the “number one big tiger of obstruction (第一大攔路虎) confronting new primary 1 students”. After almost 60 years of practice in using pinyin in schools, the Education Department of the Chinese Government finally decided that starting September 2016, the first few lessons of Chinese in primary 1 would no longer be pinyin, and students would learn the Mandarin pronunciation of Chinese characters directly by heart without pinyin. That means, for the first few months of primary 1, the teaching of Chinese in mainland China will go back a hundred years to the time when Chinese characters were taught with no written indication of pronunciation.

The above incident in mainland China can be compared with what happened in Taiwan in the past few years. In 2008, immediately after his election, the new President Ma Yingjiu ordered that Taiwan’s Romanization of Chinese, i.e. the Tongyong Pinyin, should be replaced by mainland’s pinyin, and within a year or so he was successful in enforcing his decree throughout Taiwan in every respect including all government documents, road signs and landmark signboards, etc. However, during his 8 years’ presidency in Taiwan and no matter how hard he tried, he still failed to persuade Taiwan primary school teachers to use pinyin to teach students the Mandarin pronunciation of Chinese characters, as the mainland teachers did. Today, Taiwan primary school teachers are still using Zhuyin symbols ㄅ, ㄆ, ㄇ, ㄏ, … to mark the Mandarin pronunciation of Chinese characters for their students, a system that has been used for a century and has been proved to be better than pinyin.

Here we explain why the learning of pinyin is so difficult. Although each Roman letter used in pinyin is already given a formal phonetic definition to start with, these definitions are ignored (violated) so seriously that numerous irregularities and ambiguities are produced, and at the same time, about one-third of the Chinese syllables cannot derive their Mandarin pronunciation from their pinyin spellings according to the original definitions given to the letters. In the Appendix of this book, we listed three finals 諛, 迂 and 約, each having two to three different spellings in different situations (Defect 1); we also listed six spellings “a, e, o, u, un, uan”, each representing two to four different finals in different situations (Defect 2).

To the learners of pinyin, the following two requirements are their heavy burdens. The first is that for each final with ambiguous spellings, they must remember how to

spell it differently in different situations, and for each spelling with ambiguous representations, they must remember what different finals it represents in different situations. The second is that to handle those syllables whose pinyin spellings do not lead to their correct Mandarin pronunciation, the learners must be able to identify them and know how to amend their pinyin spellings, before trying to derive the correct pronunciation from the spellings. This involves 14 finals, all listed in the Appendix (Defect 3). Note that when these 14 finals combine with initials, the numerous syllables so formed also cannot derive their pronunciation from their spellings.

In mainland China, most kids in primary 1 find it difficult to identify which 14 spellings of the 38 finals need amendment and which 24 do not. To save the trouble, the teachers simply cancel the whole process of “identification, amendment and derivation”, and instruct their students to *memorize by heart* each final’s spelling together with its pronunciation, treating the spelling of each final as a single new symbol for the final. They call this way the method of *direct* pronunciation (直呼法).

For western foreign learners of Chinese, an extra difficulty comes from the user-unfriendly spelling conventions of pinyin, which differs a great deal from English spelling conventions. Below are some examples of this.

Pinyin spelling	e	en	eng	un	an	ang	ong
Close English Sound	er (non-retroflex)	un	ung	wun	arn	arng	own

Besides its difficulties in learning, another fatal drawback of pinyin is its tone notation. Pinyin uses traditional Chinese tone marks 一, ˊ, ˇ, ˋ for the 4 tones of Mandarin, placed on the top of a selected vowel letter in the spelling of each syllable. However, this method is not accepted by the people. Throughout mainland China, all the pinyin writings you may see on road signs, shop signs, landmark signboards, book covers, commodity packaging, and so on, do not have any tone marks. Even the pinyin writings on bank notes and coins issued by the government bear no tone marks.

This is a strange situation because without tone marks, no one can understand pinyin promptly, not even the Chinese people! With tone marks, pinyin can express all the thirteen hundred speech sounds of Mandarin, which come from only about four hundred syllables spoken at various tones, but without tone notation, pinyin at once shrinks from thirteen hundred to four hundred and is highly ambiguous. Conceivably, this explains why all over the world, wherever there is pinyin, there are always Chinese characters beside it to tell you the meaning. In such a situation, what is the use of pinyin? In fact, this is rather ironic: the creation of pinyin was supposed to help people read Chinese characters, but things are now the other way round, Chinese people are using Chinese characters to recognize pinyin!

# Creation of a New System

My research on improving the spellings of finals and the tone notation of pinyin has lasted for almost a decade.

Common sense tells us that the best method of tone notation is to use the same kind of symbols we are using for syllables, i.e., English letters, to be placed at the end of the spelling of the syllables. The reason why the designers of pinyin did not follow this simple idea is because they could not find sufficient letters to represent the 4 tones such that when syllables are joined together to form compound words, no ambiguities would occur. Joining syllables together in a compound word is a must, because no one would like to see a word like “potato” written as “po ta to”.

My first breakthrough occurred in 2013 when I discovered by logical reasoning that the letters **x, j, q** satisfy this requirement. The arrangement I chose is as follows:

Letters **x, j** and **q** added to the syllable at the end represent the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> tones respectively, and “nothing added to the syllable” represents the 4<sup>th</sup> tone.

<u>Example.</u>	pinyin:	shī	shí	shǐ	shì
	new method:	shix	shij	shiq	shi

This new method is called the “XJQ123 tone notation”. It clears all the defects found in pinyin’s tone notation. The Hong Kong Government has granted a sum of HK\$250,000 for applying for patent of this method in various countries.

The study of the spelling problems in pinyin’s finals had wasted lots of my time before I discovered that except for the vowel 迂, all the vowels and end consonants of Mandarin actually have exact or very close equivalents in the English language. This directed me to a new approach. First, I selected 10 basic finals that contain all the 9 vowels and 2 end consonants of Mandarin, namely 啊 诶 衣 喔 烏 迂 鵝 兒 恩 翰, so that all the remaining finals are expressible in terms of them. As **v** is the only letter not used in the pinyin system, I naturally let **v** = 迂, where 迂 (IPA /y/) is pronounced like the vowel **i** but with rounded and contracted lips. Then, adopting the 7 vowels and 2 end consonants (underlined) in the 8 English words “**f**ather, **d**esk, **h**is, **b**oss, **r**ule, **h**er, **s**un, **s**ung” and adding **eh** = 鵝 to them, I successfully established the phonetic representation of the 10 basic finals whose Mandarin pronunciation is very close or equivalent to English (except for **v**). These 10 fundamental finals, containing all the 9 vowels and the 2 end consonants of Mandarin, are as follows:

<b>a</b> 啊,	<b>e</b> 诶,	<b>i</b> 衣,	<b>o</b> 喔,	<b>u</b> 烏,	<b>v</b> 迂,	<b>eh</b> 鵝,	<b>er</b> 兒,	<b>un</b> 恩,	<b>ung</b> 翰,
1	2	3	4	5	6	7	8	9/1	9/2

where **eh** 鵝 is the non-retroflex form of **er** 兒 (same as **ah** and **ar** in English).

It is important to note that the 10 basic finals must be pronounced according to the Mandarin pronunciation of the 10 Chinese characters, not according to English. As mentioned before, all the remaining finals are expressible in terms of the 10 basics. Below we present these 28 finals, all expressed in terms of the 9 vowels and 2 end consonants contained in the 10 basics, and thus all finals are pronounced according to the pronunciation of the 10 basics, with no irregularities or ambiguities.

**ei** 嘍, **ai** 哀, **au** 熬, **an** 安, **ang** 昂, **ou** 歐, **oung** (東的韻母),  
**ia** 呀, **ie** 耶, **ien** 烟, **io** 唷, **iau** 腰, **iou** 憂, **ioung** 雍,  
**iang** 央, **in** 因, **ing** 英, **ua** 蛙, **uan** 彎, **uo** 窩, **uai** 歪,  
**uei** 威, **uun** 溫, **uang** 汪, **uung** 翁, **ve** 約, **ven** 冤, **vn** 暈

## Initials

1	玻	b
2	坡	p
3	摸	m
4	佛	f
5	得	d
6	特	t
7	訥	n
8	勒	l
9	哥	g
10	科	k
11	喝	h
12	基	j
13	欺	q
14	希	x
15	知	zh
16	蚩	ch
17	詩	sh
18	日	r
19	資	z
20	雌	c
21	思	s

## Finals in LCRC

	Final	LCRC	Final	LCRC	Final	LCRC	Final	LCRC
0			衣	i	烏	u	迂	v
1	啊	a	呀	ia	蛙	ua		
2	誼	e	耶	ie			約	ve
3	喔	o	唷	io	窩	uo		
4	鵝	eh						
5	兒	er						
6	哀	ai			歪	uai		
7	嘍	ei			威	uei		
8	熬	au	腰	iau				
9	歐	ou	憂	iou				
10	of 東	oung	雍	ioung				
11	安	an			彎	uan		
12	昂	ang	央	iang	汪	uang		
13	恩	<u>un</u>			溫	<u>uun</u>		
14	翰	<u>ung</u>			翁	<u>uung</u>		
15	(en)		烟	ien			冤	ven
16	(n)		因	in			暈	vn
17	(ng)		英	ing				

**Note.** “oung” and “ioung” may be shortened as “oun” and “ioun” because there is almost no difference in sound effect.

Note that the 5<sup>th</sup> and 9<sup>th</sup> vowels are different but are represented by the same symbol **u** (**u**<sup>5</sup> and **u**<sup>9</sup>). It is very easy to distinguish them because **u**<sup>5</sup> has a pronunciation 烏 by itself, but **u**<sup>9</sup> does not. **u**<sup>9</sup> has a pronunciation only when it is in combination with **n** or **ng**. Note also that the final **oung** should be pronounced as “ou + ng”, *not* “o + ung”, and that the sound of **ing** in Mandarin is slightly different from English. It sounds like **iung**.

With the above renewal of spellings of finals and the establishment of the XJQ123 tone notation, a new phonetic system is thus created for Mandarin. It is named Lo’s Complete Romanization of Chinese or LCRC. The 2 tables above list the LCRC spellings of the 21 initials and the 38 finals of Mandarin. Note that LCRC and pinyin use exactly the same symbols for the 21 initials. The two systems differ only in tone notation and final spellings.

LCRC is a powerful learning engine for Mandarin Chinese. Starting with 9 symbols/spellings that most people already know, plus **v** = 迂, one at once grasps all the finals of Mandarin, and combining them with front consonants (initials), he at once grasps all the 400 syllables of Mandarin, which, when spoken with tones, cover all the 1300 speech sounds of the language. So, from now on with LCRC, learning Mandarin Chinese will be simple and easy, and the only difficult part of it is the differentiation of a few initials, or front consonants, which sound very alike in pronunciation. LCRC can express all speech sounds of Mandarin in writing. So reading LCRC writing is equivalent to listening to spoken Mandarin. In fact, LCRC writing is even easier to comprehend than spoken Mandarin because combining syllables into compound words and using punctuations in writing are of great help to reading comprehension. This implies that LCRC can be used by people as a tool of communication, equivalent to the writing of a language. So in future, foreigners learning Chinese may choose LCRC to be a substitute for traditional Chinese characters.

Surprised by the power of LCRC, the reader may wonder how many spellings of

### Conversion: Pinyin → LCRC

Pinyin		Final	LCRC
ao		熬	au
e		鵝	eh
ê		誼	e
en		恩	un
eng		鞞	ung
ian		烟	ien
iao		腰	iau
iong		雍	ioung
iu		憂	iou
ong		of 東	oung
u	with other initials	*烏	u
	with j, q, x, y	迂	v
ü	with other initials		
uan	with j, q, x, y	冤	ven
	with other initials	*彎	uan
ue	with j, q, x, y	約	ve
üe	with other initials		
ui		威	uei
un	with j, q, x, y	暈	vn
	with other initials	溫	uun

\*Final of same spelling in both systems

finals in LCRC are different from those in pinyin. The answer is 16, all listed in the Conversion Table above. Note that with this table in your hand, knowing LCRC means you already know pinyin. So the reader has no need to worry that he cannot pronounce the toneless pinyin writings he may see everywhere in the world.

We mentioned before that the XJQ123 tone notation satisfies the requirement that when syllables are joined together to form compound words, no ambiguities will occur. This is because for any x, j, q letter appearing in a compound word, we have a very simple method to identify whether it is an initial or a tone notation. The method of identification is as follows:

Any **x, j, q** letter in a compound word is an initial if it is immediately followed by **i** or **v**, and is a tone notation if otherwise.

Ex. fangxia = fang xia (放下 tones 4,4), fangxan = fangx an (方案 tones 1,4),  
fangxien = fangj xien (防線 tones 2,4), fanqerj = fanq erj (反而 tones 3,2),  
muqi = mu qi (暮氣 tones 4,4), yiqjingx = yiq jingx (已經 tones 3,1)

The method's rationale is based on 3 intrinsic properties of the Mandarin dialect: (1) The front consonants **x, j, q** only take vowels **i** and **v**; (2) No syllable begins with vowel **i** or **v** (see Rule on Usage of w/y below); (3) No syllable ends in **x, j, or q**.

**Rule on Usage of w/y.** LCRC and pinyin use **w** and **y** in the same way. That is, when finals act as syllables,

1. for finals beginning with **v**, add **y** before **v**;
2. for finals beginning with **i** or **u** (**u**<sup>5</sup>) followed immediately by a vowel, replace i by **y** and **u** by **w**, but if the finals are not followed by a vowel, add y before **i** and **w** before **u** (not applicable to finals **un** and **ung** as their vowel **u**<sup>9</sup> is different).

**Rule on Light Tones.** LCRC and pinyin use the same notation for light tones, i.e., a dot “.” placed in front of the spelling, but LCRC has its own **Rule on light tones**:

1. The light tones **·deh, ·leh, ·meh, ·neh** and **·er** should be shortened as **dh, lh, mh, nh** and **r** respectively;
2. if a light tone has traceable origin within its syllable, it should be replaced by its original tone;
3. if a light tone has no traceable origin within its syllable, the dot of light-tone notation can be omitted provided that the omission does not cause ambiguity in the meaning of the sentence. Keep the dot if such ambiguity does occur.

**About the Final of 東.** Final **ou** 歐 has a special characteristic: when it combines with **ng** and **n**, the two sounds **oung** and **oun** so generated are hard to differentiate for the ordinary people; but abbreviating **oung** as **oun** can simplify writing and sight reading in the system. So in practice, this abbreviation should be adopted. **【End】**

# Appendix: Ten Defects of Pinyin

## **【These defects are all corrected in LCRC】**

### Defect 1: Different symbols for the same final

Each of the finals 諛, 迂 and 約 has 2 to 3 different Roman representations.

諛 : ê 諛, e (in 貼: tie), a (in 煙: yan)

迂 : ü (in 綠: lü), u (in 巨: ju)

約 : üe (in 略: lüe), ue (in 確: que)

### Defect 2: Different sounds for the same symbol

Each of a, e, o, u, un and uan has 2 to 4 different pronunciations.

a : an 安(a = 啊/a/), tian 天(a = 諛/e/)

e : ge 哥(e = 鵝/ɣ/), ye 耶(e = 諛/e/)

o : yo 唷(o = 喔/ɔ/), yong 雍(o = /ʊ/)

u : gu 姑(u = 烏/u/), qu 區(u = 迂/y/),

xiu 修(u = 歐/oʊ/), kun 坤(u = 烏鵝/uɣ/)

un : gun 棍(un = 溫/uən/), xun 訓(un = 暈/yn/)

uan : suan 酸(uan = 彎/uan/), xuan 宣(uan = 冤/yen/)

(One symbol u has 4 different pronunciations!)

### Defect 3: 14 finals have wrong spelling

The following finals cannot derive their pronunciation from their spellings according to the symbols' formal definitions:

ao 熬	iao 腰	ong (final of 東)	
iong 雍	ie 耶	üe/ue 約	
ei 欸	ian 烟	uan 冤	ü/u 迂
un 溫	un 暈	iu 憂	ui 威

Formal definition: a 啊, i 衣, o 喔, u 烏, ü 迂, e 鵝

**Consequences:** (1) 1/3 of the syllables cannot derive their pronunciation from their spellings; (2) Spellings of finals cannot be deduced from pronunciation and have to be memorized by heart.

### Defect 4: Spellings of finals vary with initials

Finals	Pinyin	
烏	u	with other initials
迂		with j, q, x, y
冤	uan	with other initials
彎		with j, q, x, y
約	ue	with other initials
	üe	with j, q, x, y
暈	un	with other initials
溫		with j, q, x, y

### **Defect 5: Pinyin is user-unfriendly to foreigners**

<b>Syllables</b>	<b>Pinyin</b>	<b>LCRC</b>
耶, 哥, 分	ye, ge, fen	ye, geh, fun
唷, 優, 雍	yo, you, yong	yo, you, youn
班, 煙, 噴	ban, yan, pen	ban, yen, pun
亨, 僧	heng, seng	hung, sung
根, 棍, 君	gen, gun, jun	gun, guun, jvn

### **Defect 6: A hotchpotch of symbols**

To express all the speech sounds of Mandarin including the tones, pinyin needs 25 English letters, 1 German letter ü, 1 French letter ê and 4 ancient Chinese tone marks — ˉ ˊ ˋ ˋˊ ˋˋˊ .

### **Defect 7: Tone marks are extremely inconvenient.**

The Chinese tone marks are so inconvenient that all the pinyin writings displayed everywhere in the world have their tone marks omitted. But without tone marks, no one can understand pinyin, not even the Chinese! So, wherever there is pinyin, there are always Chinese characters beside it to tell you the meaning. What then is the use of pinyin?

**Defect 8: No keyboard in the world can type out pinyin with tones.**

Now, almost 60 years after the creation of pinyin, there are still no keyboards in the world that can type out pinyin with its tone marks.

**Defect 9: Tone marks not significant enough for easy recognition**

Tone marks are much smaller in size than letters. This lowers the speed of reading pinyin with tones.

Examples    shī    shí    shǐ    shì  
                  chuāng    chuáng    chuǎng    chuàng

**LCRC:** Reading LCRC with tones is just like reading English.

Example    LCRC:    shix    shij    shiq    shi  
                  English:    skin    skit    skip    ski

Example    LCRC:    chuangx    chuangj    chuanguq    chuanguang  
                  English:    adviser    advises    advised    advise

**Defect 10: Pinyin cannot be used as a writing system**

This is because adding tones on pinyin writings takes time and no keyboard in the world can type out pinyin with its tone marks.

(LCRC can be used as a writing system for Chinese)