# A GUIDE TO THE CHINESE (PINYIN) SPELLING SYSTEM- 

## HOW TO PRONOUNCE CHINESE NAMES

by

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## The Chinese Language and Mandarin

The Chinese language is spoken by over 1 billion people, and is spoken in the People's Republic of China, in Taiwan, and other countries around the world. Chinese has numerous dialects, many of which are mutually unintelligible. Mandarin is spoken by more people than any other dialect, and is the official language of the People's Republic of China. Mandarin, also known as "putonghua," or "common speech" is based on the dialect of Beijing.

## The Mandarin Sound System

Modern spoken Mandarin is composed of about 1300 syllables. Each syllable consists of an initial, a final, and a tone. The initial is the initial consonant of the syllable, and the final consists of the vowels and consonants that follow the initial. The tone is the pitch pattern associated with each syllable. In some syllables there is no initial consonant, and in this case the syllable is said to have a zero or null initial.

## The Tones in Mandarin

Every syllable in Modern Mandarin has a pitch pattern associated with that syllable, which is called a tone. There are four basic tones in Mandarin In addition, there is a "neutral tone" which occurs with some syllables (Yin and Felley 1990). The tone is an integral part of each syllable, and changing the tone of a syllable usually changes the meaning of that syllable. ${ }^{1}$

## The Pinyin Spelling System

Chinese, in Mandarin and other dialects, is normally written in Chinese characters. In addition, the Romanized spelling system known as Hanyu Pinyin or pinyin is also used to indicate the sounds of Mandarin. It is used in dictionaries and on maps, as well as on storefronts and street signs in China. It is also learned by children in the Chinese school system, and can be found in Chinese language textbooks. Since 1979, the pinyin system has been used as an international standard to write and indicate Chinese names throughout the world. In English, the pinyin system is used on maps and in books, periodicals, on television, in film, and online to indicate place names, personal names,
and Chinese terms in Mandarin. Since Chinese place and personal names used in English normally do not indicate tones, tones will not be used or indicated in the pinyin spellings used in this paper.

## The Pinyin Initials

The pinyin spelling system uses letters to indicate the initial consonants as well as the finals of the Mandarin sound system. Table 1 shows the letters in pinyin used to indicate the sounds of the initial consonants in Modern Standard Mandarin Chinese. In this table, each initial is indicated by the pinyin letter, the equivalent pronunciation in IPA (International Phonetic Alphabet) and, for certain examples, the approximate pronunciation of the sound in English. ${ }^{2}$

## Table 1 The Initial Consonants of Pinyin ${ }^{3}$

| Initial Consonants | IPA | English Approximation |
| :---: | :---: | :---: |
| b | [p] |  |
| p | [p ^] |  |
| m | [m] |  |
| f | [f] |  |
| d | [t] |  |
| t | [ $\mathrm{f}^{\text {] }}$ ] |  |
| n | [n] |  |
| 1 | [1] |  |

## Table 1 The Initial Consonants of Pinyin ${ }^{3}$

| Initial Consonants | IPA | English Approximation |
| :---: | :---: | :---: |
| Z | [ts] | like the final sound "ts" in "cats" |
| c | [ts "] | like the final sound "ts" in "cats" (heavily aspirated) |
| s | [s] |  |
| zh | [ts] | like English "j" in "jury" |
| ch | [ts'] | like English "ch" in "church" |
| sh | [s] | like English "sh" in "sugar" |
| r | [z] |  |
| j | [t6] | like English "g" in "gee", but more front (palatal) position |
| q | [ $\mathrm{t} 6^{\prime}$ ] | like English "ch" in "cheep", but more front (palatal) position |

## The Pinyin Finals

Table 2 shows the letters in pinyin used to indicate the sounds of the finals in Mandarin Chinese. In this table, each final is indicated by the pinyin letter or letters, the equivalent pronunciation in IPA, and, again for certain examples, the approximate pronunciation in English. (See Note 2.)

Table $2 \quad$ The Finals of Pinyin ${ }^{4}$

| Finals | IPA | English Approximation |
| :---: | :---: | :---: |
| a | [a] | ah |
| o | [0] |  |
| e | [ $\gamma$ ] |  |
| er | [ər] |  |
| ai | [ai] | I, aye |
| ei | [ei] | the letter "A" |
| ao | [au] | ow |
| ou | [ou] | oh |
| an | [an] | on |
| en | [ən] | -un |
| ang | [ap] |  |
| eng | [əŋ] | ung in sung |

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ong
    [uy]
i
    [i] the letter "E"
-i [1] (in syllables "zi', "ci", "si")
-i [l] (in syllables "zhi", "chi", "shi", "ri")
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Table $2 \quad$ The Finals of Pinyin ${ }^{4}$

| Finals | IPA | English Approximation |
| :---: | :---: | :---: |
| ia | [ia] |  |
| iao | [iau] | yow in yowl |
| ie | [i\&] |  |
| iu | [iou] | yo in yoga |
| ian | [ien] | yen |
| in | [in] |  |
| iang | [iay] |  |
| ing | [ị] |  |
| iong | [iuy] |  |
| u | [u] |  |
| ua | [ua] |  |


| uo | [uo] |  |
| :---: | :---: | :---: |
| uai | [uai] | why |
| ui | [uei] | whey |
| uan | [uan] | wan in wand |
| un | [uən] |  |
| uang | [uab] |  |
| ueng ${ }^{5}$ | [uəy] ${ }^{6}$ |  |
| Table 2 | The Finals of Pinyin (See Note 4.) |  |
| Finals | IPA | English Approximation |
| ü | [y] |  |
| üe | [yع ] |  |
| üan | [y\&n] |  |
| ün | [yn] |  |

## The Pinyin Syllables

There are approximately 400 spoken syllables (without tones) in Mandarin, written in the pinyin spelling system, which are combinations of pinyin initials and finals. Not every initial combines with every final to produce a spoken syllable in Mandarin. For a complete listing of all the spoken syllables in Mandarin, written in pinyin, the reader is referred to "Table of Syllables of Hanyu Pinyin" on page 77 of Yin and Felley (1990).

## Pinyin Letters and Syllables to Pay Special Attention to

In pronouncing pinyin syllables, there are certain letters or syllables which the reader needs to pay special attention to. These are as follows:

## The Letter "i"

The letter "i" in pinyin represents a high, front, unrounded plain vowel [ i ] in most pinyin finals and syllables. However, when the letter the letter " $i$ " follows any of the dental or alveopalatal consonants ${ }^{7}$, it has a different pronunciation. When it follows the dental consonants "z," "c," "s", in the syllables "zi", "ci", "si", it represents a high, front, unrounded, retroflex vowel [ 1]. When it follows the alveopalatal consonants "zh", "ch", "sh", "r", in the syllables "zhi", "chi". "shi", "ri", it represents a high, back, unrounded, retroflex vowel [ ] ]. ${ }^{8}$

## The Letter "u"

The letter "u" represents two different vowels in the pinyin system. The letter "u" represents a back rounded vowel [ $u$ ] when it follows any of the consonants other than the palatal consonants ${ }^{9}$ " j ", " q ", " x ". When the letter " u " follows the palatal consonants, it represents a front rounded vowel [ y ], such as in the syllables "ju", "jue", "juan", "jun". The only exceptions to this are the consonants "n" and "l", which can be followed by both vowels. Following these two consonants, the letter "u", written by itself, represents a back rounded vowel [ u ](i.e., in the syllables "nu", "lu"), but it can also represent the front rounded vowel [ y ], when it is written with an umlaut, as in the syllables "nü", "lü" , "nüe", "lüe". The umlaut is used in only these four syllables in pinyin. For syllables with a null initial, the letter "u" represents the back rounded vowel [u ] when it follows the letter " $w$ ", as in the syllable "wu", and the front rounded vowel [y] when it follows the letter " $y$ ", as in the syllable "yu". For a further discussion of the letter "u" following a null initial, see below, "Null Initial Syllables in Pinyin." ${ }^{10,11}$

## The Letters "uan" and "un"

Like the letter "u", the letters "uan" and "un" each represent two different finals in the pinyin system, depending on which consonants they are written with. The letters "uan" and "un" represent the finals [uan] and [uən] respectively after non palatal consonants, with the letter "u" representing the back rounded vowel [ u ]. Examples include syllables such as "duan", "tuan", "dun", "tun". The same letters "uan" and "un" represent the finals [y\&n] and [yn] after the palatal consonants ("j", "q", "x"), with the letter "u" representing the front rounded vowel [y], such as in the syllables "juan", "jun", "quan", "qun". ${ }^{12}$

## Null Initial Syllables in Pinyin

As previously mentioned, some syllables in Modern Mandarin do not possess an initial consonant and are said to have a null initial, and therefore essentially consist only of a final. There are certain rules regarding how these null initial syllables are written or spelt in pinyin. If the final begins with the letter "a", "e", or "o", the null initial syllable is
spelt the same way as the final itself. If the final begins with the letter "i" or "ü", the null initial syllable is spelt with the letter " $y$ ". If the final begins with the letter " $u$ ", the null initial syllable is spelt with the letter " $w$ ". These rules are summarized in Table 3.

## Table 3 Null Initial Syllables in Pinyin ${ }^{13}$

| Finals | Null Initial Syllables |
| :--- | :--- |
| a | a |
| o | o |
| e | e |
| er $^{14}$ | er |

## Table $3 \quad$ Null Initial Syllables in Pinyin (See Note 13.)

| Finals | Null I |
| :--- | :--- |
| ai | ai |
| ei | ei |
| ao | ao |
| ou | ou |
| an | en |
| en | ang |
| ang | eng |


| i | yi |
| :--- | :--- |
| ia | ya |
| iao | yao |
| ie | ye |
| iu | you |
|  |  |
| ian | yan |
| in | yin |
| iang | ying |
| ing | yong |
| iong |  |

Table $3 \quad$ Null Initial Syllables in Pinyin (See Note 13.)

| Finals | Null Initial Syllables |
| :--- | :--- |
| u | wu |
| uo | wa |
| uai | wo |
| ui | wai |
| uan | wan |
| un | wen |


| uang | wang |
| :--- | :---: |
| ueng | weng |
| ü | yu |
| üe | yue |
| üan | yuan |
| ün | yun |

## Chinese Personal Names

Chinese personal names consist of the surname or last name, usually written first, followed by the first name. The Chinese surname usually consists of one syllable, though occasionally can be written with two syllables. The first name can be one or two syllables. The following are some examples of personal names of famous Chinese leaders with the surname written first, followed by the first name, written in pinyin:

## Famous Chinese Leaders

Mao Zedong
Zhou Enlai
Hua Guofeng
Hu Yaobang
Deng Xiaoping
Zhao Ziyang
Jiang Zemin
Hu Jintao
Wen Jiabao

## Li Peng

## Example Chinese Surnames

Table 4 shows several examples of Chinese surnames as they are spelt according to the initial consonants of the pinyin system.

## Table 4 Example Chinese Surnames in Pinyin ${ }^{15}$

Initial Consonants
Example Surnames
b
Bai
p Pan
m Ma, Mao
f
Fang

## Table 4 Example Chinese Surnames in Pinyin ${ }^{15}$

| Initial Consonants | Example Surnames |
| :--- | :--- |
| d | Deng |
| t | Tao |
| n | Nan |
| l | Lei, Li, Lu, Liu |
| g |  |
| k | Gao |
|  | Ke |

h

Z
c

S
zh
ch
sh
r
j
q
x
$\mathrm{Hu}, \mathrm{Hou}$

Zao

Cao
Song

Zhang, Zhou, Zhao, Zhu
Chen, Cheng, Chan, Chang
Shao, Shang, Shi
Ren, Rui

Jiang, Jian
Qi, Qin, Qian, Qing, Qiang
Xie, Xu

Table 4 Example Chinese Surnames in Pinyin ${ }^{15}$

Initial Consonants
$\square$ (null initial)

Example Surnames
Wu, Wang, Wei, Wen
Yu, Yao, You, Yan, Yang

## Pinyin and Cultural Literacy

One of the most important reasons for learning the pinyin spelling system is that it allows one to read and pronounce many Chinese names, not only personal names, but also names of places, artwork, books, classics in philosophy and literature, dynasties, emperors, and references to almost any subject in Chinese culture and history.

The following is a sample of some Chinese cultural references, written in the pinyin system.

Chinese Place Names - Examples of Provinces ${ }^{16}$
Hunan

Hubei

Henan

Hebei

Shandong
Jilin

Yunnan
Guangdong
Sichuan
Guizhou

Chinese Place Names - Examples of Provinces ${ }^{16}$
Jiangxi
Jiangsu
Anhui

Zhejiang
Qinghai
Chinese Place Names - Examples of CitiesBeijingShanghaiTianjinQingdao
Suzhou
Fuzhou
Guangzhou
Taiyuan
Shenyang
Chongqing
Chengdu
Wuhan
Xi’an
Examples of Chinese Classics
Yi Jing
Shi Jing
Dao De Jing

## Examples of Chinese Dynasties

Qin
Han
Sui

Tang
Yuan
Ming
Qing

## Conclusion

The purpose of this paper has been to introduce the pinyin spelling system used in the People's Republic of China and to show its usefulness in learning the Chinese sound system, and in particular, how to pronounce Chinese names in Modern Standard Mandarin. The pinyin spelling system is used around the world, in English and in other languages, to spell Chinese names. Learning the pinyin system will enable teachers, students, and other professionals to study China, to read about China, and to talk intelligently about all things Chinese.

## NOTES

1. For a more complete description of the tones in Modern Mandarin, see DeFrancis (1976:xxiii).
2. The sounds given as English approximations are not exact equivalents to Mandarin consonants or vowels, but are rather listed to give readers some general guidelines as to the pronunciation of Mandarin sounds. For a complete description of Mandarin sounds, see "The Sounds Of Chinese" in DeFrancis (1976:xxii-xxxiv).
3. The values for the initial consonants in pinyin are taken from Wang, Zhu, and Ren (1983), Appendix II, "Tables of Consonants and Vowels of the Chinese Phonetic Alphabet and Other Phonetic Systems", Table 1, pages 255-256.
4. Values for the finals in pinyin are taken from Wang, Zhu, and Ren (1983), Appendix II, "Tables of Consonants and Vowels of the Chinese Phonetic Alphabet and Other Phonetic Systems", Table 2, Pages 257-258; and Appendix V, "Table of the Combinations of the Initials and Finals in Common Speech", page 264.
5. From DeFrancis (1976:xxvi) and Yin and Felley (1990:77).
6. The approximate IPA based on Kratochvil (1968:34).
7. The terms "dental" and "alveopalatal" for the Mandarin consonants are taken from Kratochvil (1968), Fig. 2, "Table of initial consonants", page 25.
8. Vowel descriptions taken from Kratochvil (1968), Fig. 3, "Table of medial vowels and vowel components", page 28.
9. The term "palatal" for the Mandarin consonants is taken from Kratochvil (1968), Fig. 2, "Table of initial consonants", page 25.
10. Vowel descriptions taken from Kratochvil (1968), Fig. 3, "Table of medial vowels and vowel components", page 28.
11. See Yin and Felley (1990), "Table of Syllables of Hanyu Pinyin", page 77.
12. See Yin and Felley (1990), "Table of Syllables of Hanyu Pinyin", page 77.
13. See Yin and Felley (1990), "Table of Syllables of Hanyu Pinyin", page 77.
14. Not in Yin and Felley (1990), page 77, but listed in Wang, Zhu, and Ren (1983), Appendix V, "Table of the Combinations of the Initials and Finals in Common Speech", Page 264.
15. For an extensive list of Chinese surnames, see Chen (1972).
16. See "The Peoples Of China" (1980).

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