

How to Teach Chinese Tones?

Dongdong Chen
Seton Hall University
Fall 2020

The 4 basic tones in Chinese



McGinnis (1996)

- ## Questions

Which of the four tones are most easily misidentified by beginning students, and what those tones are mistakenly recognized?

- ## Subjects

Two groups of first-year students of Mandarin Chinese, English native speakers, and Japanese native speakers.

- ## Methodology

Subjects marked tones above syllables printed on an answer sheet, listening to a tape, recorded by a 26-year old female native speaker of Beijing

Tonal identification diagnostics: (i) 1 syllable; (ii) 2 syllables; (iii) 3 syllables

Two tests: (i) the end of week one; (ii) the end of week three

Results (1)

Language	1990-91	1991-92	1992-93
AmerEnglish	10.1	11.3	9.7
Japanese	15.1	8.4	11.8

Error Means, Week 1 Test Administration

Language	1990-91	1991-92	1992-93
AmerEnglish	8.4	7.0	6.0
Japanese	7.1	4.4	2.7

Error Means, Week 3 Test Administration

Results (2)

	American English		Japanese	
	Week 1	Week 3	Week 1	Week 3
Tones 2 & 4	2.98	1.97	3.85	1.56
Tones 1 & 2	2.97	1.82	2.89	1.04
Tones 1 & 4	2.08	1.29	2.22	1.04
Tones 2 & 3	1.44	0.90	2.44	1.04

Tonal Pair Confusion Means

Conclusion

Learners showed a high rate of confusion between **Tone 1/Tone 2**, and **Tone 2/Tone 4**, which was in conflict with the studies in the literature (the confusion between Tone 2/Tone 3).

This study: **55 vs 35; 35 vs 51**

General observation: **35 vs 214**

L2 Acquisition of Mandarin Chinese Tones

Chen (2010)

Presented at The First Teachers College
Columbia University Roundtable in Second
Language Studies (TCCRISLS)

October 1, 2010.

Research Questions

- What kind of tonal error patterns do CFL learners produce?
- Can CFL learners acquire Chinese tones?

Previous studies on CFL learners' tonal errors

Hierarchy of difficulty (easy---difficult)

1. Yue (1986): T1, T4, T2, T3
2. Shen (1989): T2, T3, neutral, T1, T4
3. 王韞佳(1995): T1, T4, T3, T2
4. Zhang (2010): T1, T4, Half 3, T2

Previous studies on CFL learners' tonal errors

A. Confusion

1. Kiriloff (1969): confused mostly with T2 and T3, and then T1 and T2
2. Lü (1992): confused mostly with T2 and T4, and T1 and T2

B. Kinds of errors

1. Chao (1980)

--tonal mis-production centered on errors in tonal register 调域 (e.g., the low tone is inaccurately read as high tone or vice versa)

--less errors in tonal contour 调型 (e.g. confuse level tone with contour tones)

2. 赵金铭(1988): confirms the findings of Chao (1980)

3. Shen (1989): errors mainly on tonal register, T4 most difficult

4. Miracle (1989): errors fall into both tonal register, tonal contour, T2 most difficult

5. 王韞佳(1995)

For the easy tones (i.e., T1, T4), errors are on **tonal register**, for the difficult tones (i.e., T3, T2), errors are on both, i.e., **tonal contour and tonal register**

Previous studies on CFL learners' tonal errors

■ Gui (2000)

Noticed the interference of English intonation in Chinese tones.

■ Wang et al (2001)

Chinese native processed tones predominantly in the left cerebral hemisphere, while American learners bilaterally.

■ Peng & Hu (2006)

The disagreement on the hierarchy of difficulty of the four tones might be mainly due to the differences of data types on which analyses were based.

■ Guo and Tao (2008)

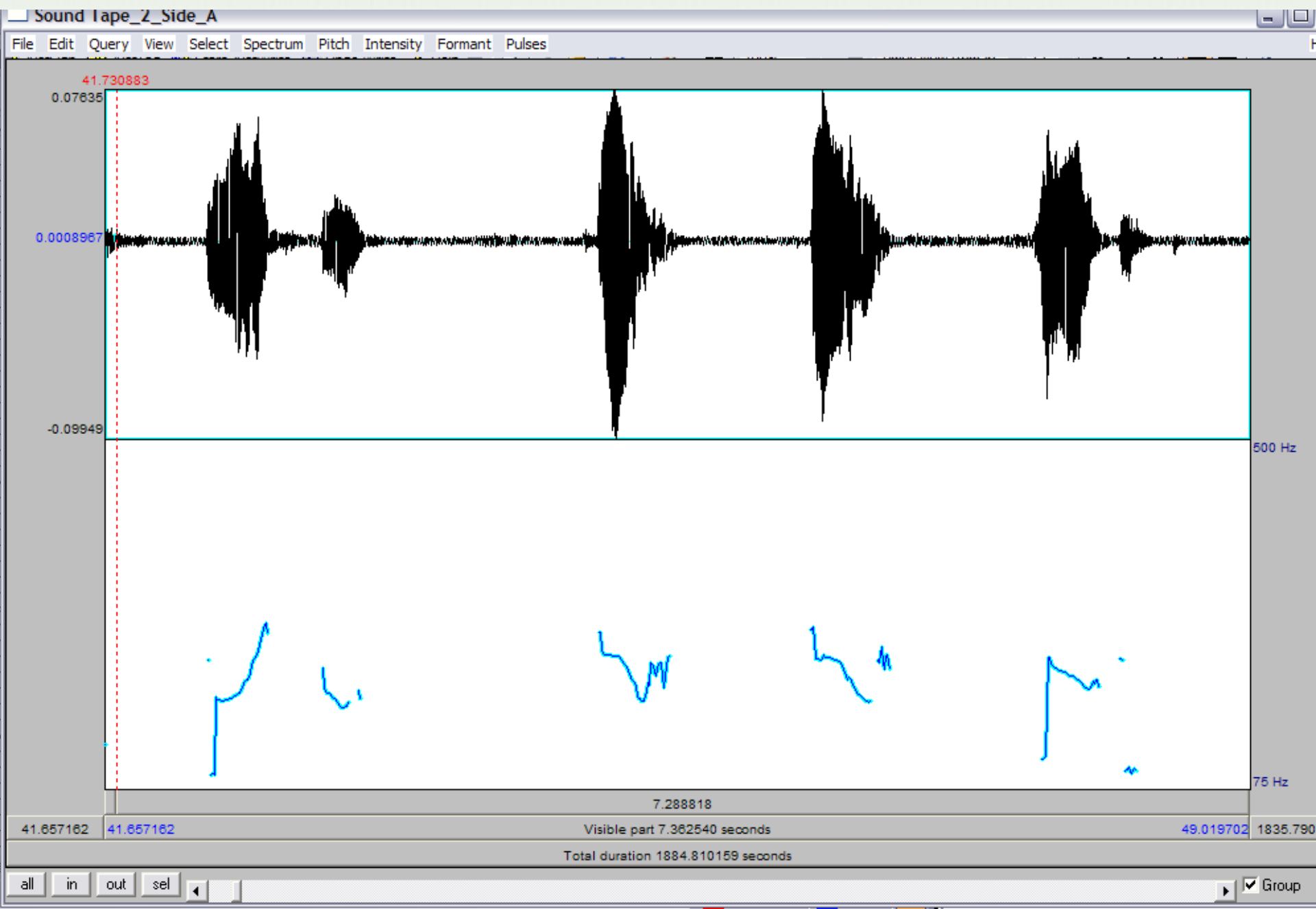
Studied tonal production at the sentence level, 3 minutes presentation, T1 and T4 greatest accuracy.

My Study

Methods

- 21 college students from Introductory Chinese were tested; 14 students were tested twice on the same materials. There is a 4-month gap between the first test and the second test.
- Students were required to read and record a list of 10 disyllabic words
e.g., kāiguān, hónglóu, yǒuhǎo, diànhuà, mèimei, wǒde
- www.K7.net was used to have students' reading digitized; Praat was used to measure and analyze the pitch data

A Sample of Pitch Contour from Praat --yǒuhǎo, kuàlè, mèmei, diànhuà



Results of Test 1 & Test 2

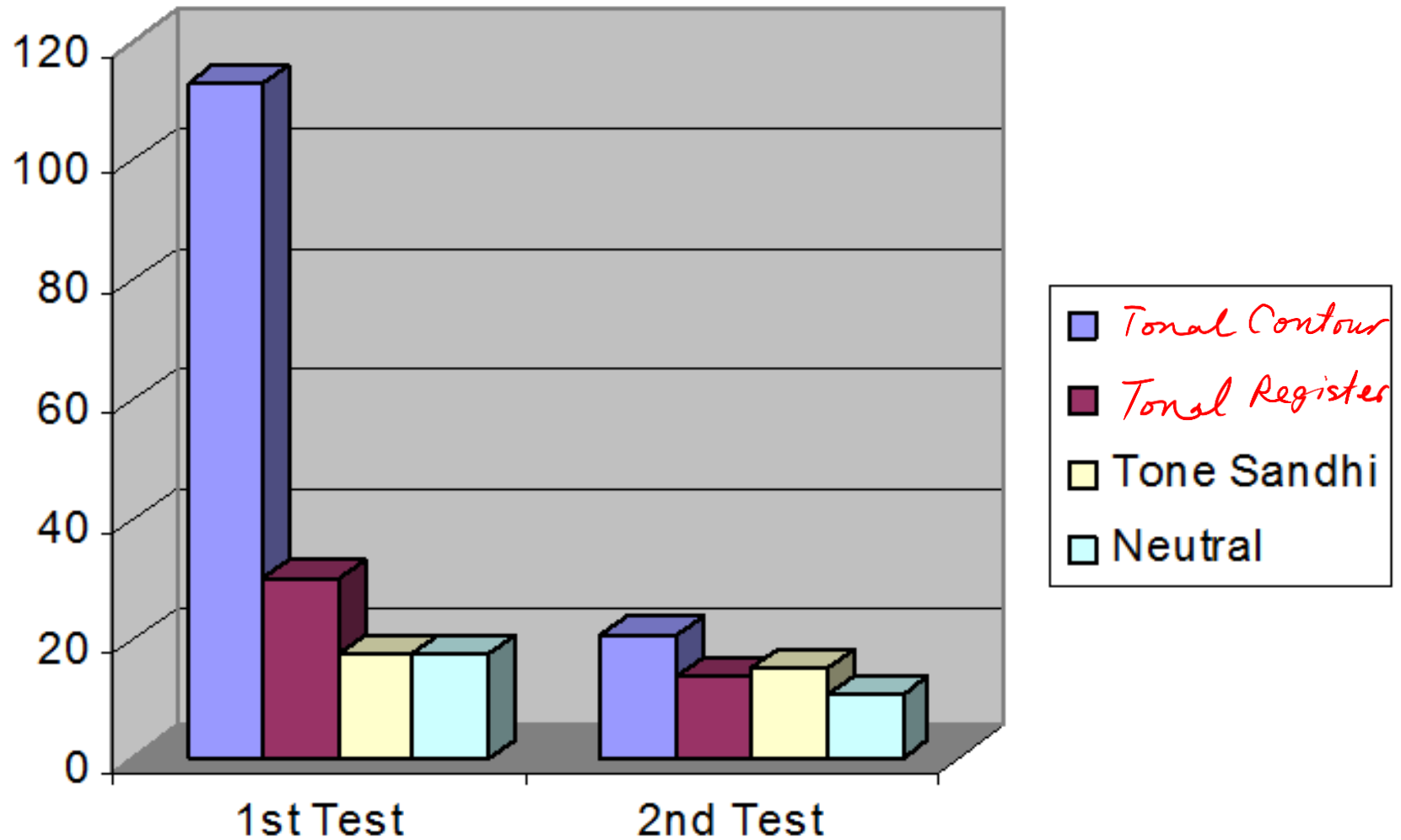
Table 1: Errors of the First Test

Words	KY	MR	BL	AS	GR	JM	HZ	TiM	JH	MY	MR	XH	KT	MK
Errors	5	15	15	10	16	13	4	12	16	12	10	18	13	20
I1	4	10	9	4	15	9	1	6	10	5	7	13	7	13
I2	0	1	3	2	0	1	2	5	4	3	1	2	2	4
I3	1	2	2	3	0	2	0	1	0	2	1	1	2	1
I4	0	2	1	1	1	1	1	0	2	2	1	2	2	2

Table 2: Errors of the Second Test

Words	KY	MR	BL	AS	GR	JM	HZ	TiM	JH	MY	MR	XH	KT	MK
Errors	1	11	6	4	3	2	2	3	4	5	4	9	3	4
I1	0	5	1	1	1	0	0	1	1	3	1	5	1	1
I2	0	4	3	1	0	0	0	0	2	0	2	1	0	1
I3	1	1	2	1	1	1	0	1	1	1	1	2	1	1
I4	0	1	0	1	1	1	2	1	0	1	0	1	1	1

Results of Types of Errors



Results of Total Errors

		First test	Second test
Tone Comb.	Ex.	No. of Errors	No. of Errors
11	kāiguān	45	12
22	hónglóu	39	12
33	yǒuhǎo	26	9
44	diànhuà	37	6
40	mèimei	10	2
30	wǒde	21	19

Summary of results

In the first test, most of the CFL learners' tonal errors fall into the category of **tonal contour**; some in the category of **tonal register**.

In the second test, errors were tremendously reduced. The majority of errors fall into the **tonal contour**.

Discussion

Results suggest:

1. 1st tone poses the biggest difficulty to learners
2. Students at the initial stage have tremendous difficulty with Mandarin tones. However, as time passes by, they eventually progress, and are able to acquire Mandarin tones.

Two Innovations for Teaching Tones

Bar-Lev (1991)



Teaching of 4 Tones

mǎ


má

mǎ

mà

“Most Americans can no more easily remember diacritics than numbers of the tones themselves.” Bar-Lev (1991, 8)

A double system of representation (Bar-Lev, 1991)

ma 	ma?	ma _L	ma!
--------------------------------------------------------------------------------------	-----	-----------------	-----

For pronunciation

maH	maR	maL	maF
-----	-----	-----	-----

For memorization

Other opinions

Using other Romanization systems



Using Guoyeu Romatzyh

- **Gwoyēu Romatzyh** "National Language Romanization", abbreviated **GR**, is a system for writing Mandarin Chinese in the Latin alphabet, conceived by Y.R. Chao, and developed by a group of linguists (including Chao) from 1925 to 1926. It was published in 1926, and promulgated by the government in 1928.

compare the three systems:

- Pinyin: *āi*, *ái*, *ǎi* and *ài*
- Wade-Giles: *ai¹*, *ai²*, *ai³*, *ai⁴*
- GR: *ai*, *air*, *ae* and *ay*

Nii Woo Ta Syhg Ren

Ding: Sheir a?

Wang: Woo, sh woo.

Ding: Nii sh sheir?

Wang: Woo shi Wang Ell. Nii ne? Nii sh sheir ne?

Ding: Woo ia, woo shi Ding I. Ta sh sheir a?

Wang: Ta sh Jang San.

...

Mandarin Primer , Chao (1961)

Using Zhùyīn Fúhà/POMOFO

Zhuyin	ㄚ	ㄛ	ㄝ	ㄜ	ㄞ	ㄟ	ㄠ	ㄡ	ㄢ	ㄣ	ㄤ	ㄥ	ㄦ	ㄩ	ㄩㄝ	ㄩㄞ	ㄩㄠ	ㄩㄢ	ㄩㄣ
Pinyin	a	o	ê	e	ai	ei	ao	ou	an	en	ang	eng	er	yi	ye	you	yan	yin	ying
Wade-Giles	a	o	eh	o/ê	ai	ei	ao	ou	an	ên	ang	êng	êrh	i	yeh	yu	yen	yin	ying

Zhùyīn Fúhà/POMOFO was promulgated in 1918 by the Ministry of Education of the Republic of China. Pinyin was published by the Chinese government in 1958, and revised several times later.

The Teaching Sequence of the 4 Tones

(1). Traditional, or conventional way

1st, 2nd, 3rd, 4th

Using different teaching sequence



The Teaching Sequence of the 4 Tones

(2). Recommended sequence (Shi, 2006)



(3) 4, 3, 1, 2 in a communicative context(Bar-Lev, 1991)

day	lesson	tone	sample words	exceptions	review
1	1	4	ròu, fàn,...; yào, xièxie	ni hǎo ma..	
2	2	4		nǎr zài	bàozhǐ, diàn, dàolu,...; zhèli
2	3	3	wǒ, nǐ, mǔqīn, lǎoshī		dà, lèi
3	4	1	yīshēng, gōngrén; chī, gēn		
3	5				kàn, yào, yòng; zì, Rìben
4	6				huà, fùqīn, gùshì; shuō, zhīdao
4	7				shū, shān, Zhōngguó
5	8	2	rén, háizi; lái, máng		
5	9				chá, qián,...
6	10				shuǐ, Měiguó; yǒu, gēi, mǎi; ...
6	11	*			duō, shǎo; sān, wú, shí kuài qián
7	12				jīdàn, jīròu
7	13	*			mǎ, gǒu, yú, niúròu
8	14	.			xué, dàxué, xiǎoxué diànhuà, diànchē, qìchē

定调音节（苏英霞，2018）

1. 酸甜苦辣

2. 都听， 都读， 都写， 都看
还听， 还读， 还写， 还看
也听， 也读， 也写， 也看
又听， 又读， 又写， 又看

what about 不听， 不读， 不写， 不看？

3. 咖啡

啤酒

可乐

花好月圆

Using different methods



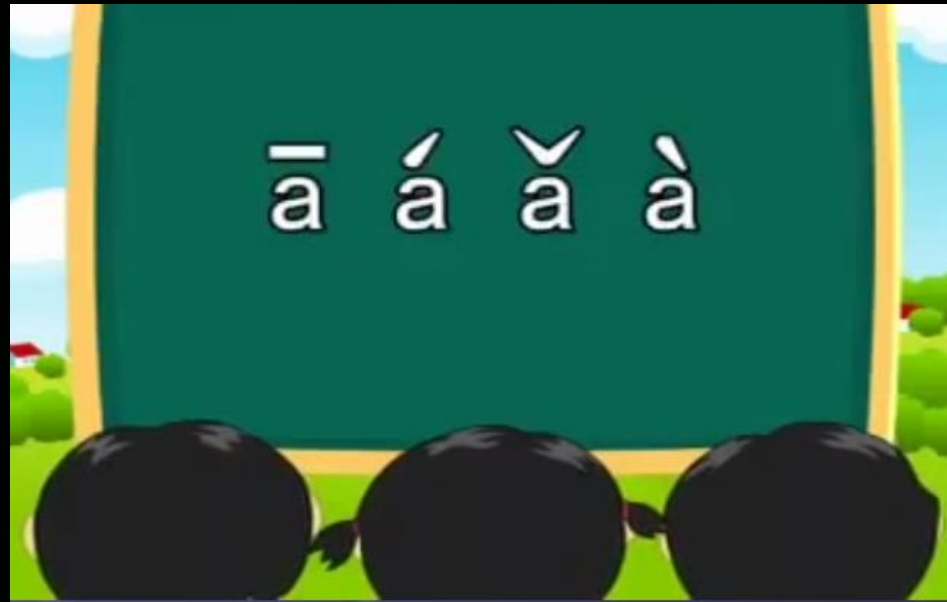
TPR



My TPR

Students use the rubber band to say each of the tones while doing the high-high, rising, dipping, and falling movements respectively.

Sing the tones



<http://www.youtube.com/watch?v=--2tfkFeM9E&feature=related>

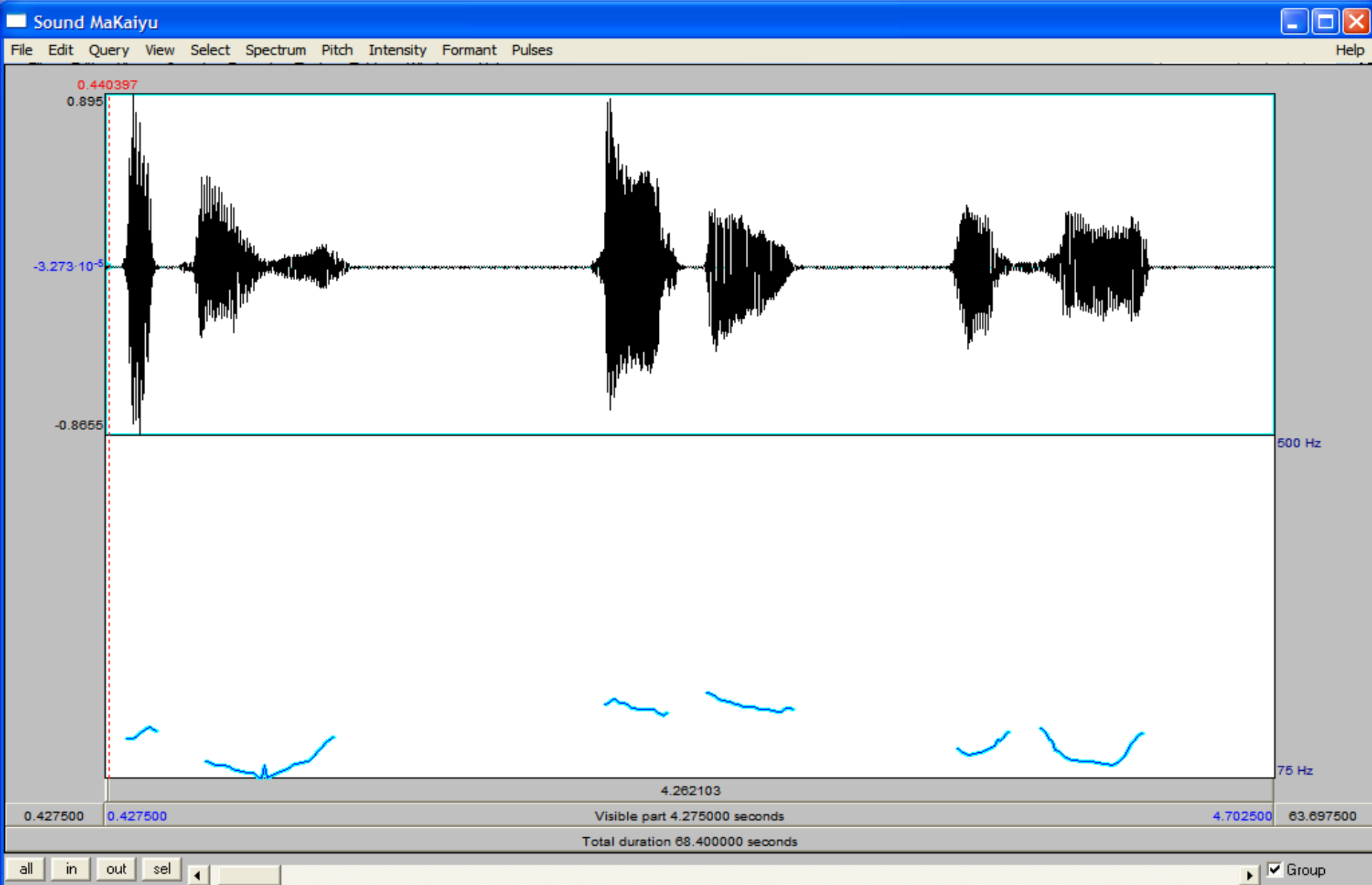
Sing the tones

- Put different tones in a piece of music

Use pictures

Each graphic represents one tone.

Use technology: Praat



Any other ideas?

The background of the slide features a faint, light blue grid pattern. Overlaid on this grid is a blurred image of a person's hands and arms, possibly in a professional or technical setting, which is rendered in a light, semi-transparent blue color.

References

- Bar-Lev, Z. (1991). Two Innovations for Teaching Tones. *Journal of Chinese Language Teachers Association* 26 (3): 1-24.
- Chao, Y-R. (1980). *Yuyan Wenti*. Beijing: Commerce Press
- Gui, Mingchao (2003). 再论美国英语语调对美国学生学习汉语声调的干扰。 <<云南师范大学学报>>
- Gui, Mingchao (2000a). The Interference of English Intonation to the Perception of Mandarin Tones by American Students, Chinese Teaching in the World, Beijing Language and Culture University of Beijing Press.
- Gui, Mingchao (2000b). Problem of Mandarin tone acquisition of American students, Wuhan: Proceedings of the International Conference on Chinese Pedagogy 2000.
- Shen (1989) . Toward A Register Approach in Teaching Mandarin Tones, *Journal of the Chinese Language Teachers Association*, Vol. 24/3: 27-49.
- Guo L. & Tao, L (2008). Tone Production in Mandarin Chinese by American Students: A Case Study Proceedings of the 20th North American Conference on Chinese Linguistics (NACCL-20) Vol. 1. pp. 123-138.
- McGinnis, S. (ed). (1996). *Chinese Pedagogy: An Emerging Field*. Ohio State University: Foreign Language Publications & Services.
- Miracle, W. Charles. (1989). Tone Production of American Students of Chinese: A Preliminary Acoustic Study. *Journal of the Chinese Language Teachers Association*, Vol. 24/3: 49-65.
- Peng, Y. & Hu, Y. (2006) Dui wai hanyu shengdiao jiaoxue yanjiu huiwang. *Jinnan Daxue Huanwen Xueyuan Xuebao*, 4, 18-26. (An review of studies on teaching tons in Chinese as a second language. *The Journal of Chinese College in Jinan University*, 4, 18-26)
- Shen, X.N. (1989) . Toward A Register Approach in Teaching Mandarin Tones, *Journal of the Chinese Language Teachers Association*, Vol. 24/3: 27-47.
- Wang, Yue, Jongman, Allard and Sereno, Joan A. (2001). Dichotic perception of Mandarin tones by Chinese and American listeners. *Brain and Language*, 78 (3), 3320348.
- Yue-Hashimoto, A.O. (1986). "Shengdiao Jiaofa de Shangque", *Diyijie Guoji Hanyu Jiaoxue Taolunhui Lunwenxuan*, pp. 229-235.
- 马燕华 (1994): 初级汉语水平留学生的普通话声调误区。 <<北京师范大学学报>> 。
- 王韞佳 (1995). 也谈美国人学习汉语声调。 <<语言教学与研究>>
- 赵金铭 (1988). 从一些声调语言的声调说到汉语声调。 <<第二届国际汉语教学讨论会论文选>>, 北京语言学院出版社。