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A multiple channel mode of mandarin tone acquisition

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Abstract

The present study seeks to explore a model of learning Chinese tone variations, which are considered most, among others, intriguing and challenging for CFL (Chinese as Foreign language) learners. The model has been developed on the bases of learning principles in learning psychology (e.g., Ausubel's subsumption principle). Ausubel contends that learning is a process that creates or consolidates the relations between new material and cognitive structure. The present study also seeks to answer the question: How can morphemes and phonemes of Chines lexicons or sentences be integrated so that CFL learners comprehend and catch the tone variations of the target words/sentences? The present model borrows ideas from keyword method, developed to help American students learn Spanish vocabulary. However keyword method was mainly adopted to create semantic and morphemic relationships on a single lexicon, having little to do with the connection between phonemic and morphemic aspects of a word, which also serves as one of the purposes of the present study to uncover the relationships in between.

Keywords: Tone variations, Chinese as Foreign Language, Chinese characters, keyword, multiple channel

Introduction

This study is to apply the innovated for learning Chinese tone pronunciation with a view to increasing efficiency of Chinese spoken language. This mode of learning is basically derived from ideas in cognitive psychology, as well as the existing visual & aural tools to help overcome the difficulty of learning Chinese tone pronunciation. (Hsu, etc. 2014; Guo, etc. 2016; Li, etc. 2016) Quite often heard are, "You can't speak good Chinese if you pronounce the wrong tone", and "Tone pronunciation, is the key to learning Chinese". For those CFL (Chinese as a foreign language) learners, these sentences are beyond their comprehension. Meanwhile, for those who teach Chinese as aforeign language,

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frustrations in the course of Chinese instruction are not uncommon, when

dealing with different Chinese tones.

Principles Involved in Tone Identification

Difficulties of learning Chinese can be manifolds: characters, word strikes, pronunciations, as well as tones. As Moser (1991) puts it, Chinese is significantly harder to learn than *any* of the other thirty or so major world languages for an average American. In his article titled "Why Chinese Is So Damn Hard?" Moser enumerated a few difficulties encountered in his course of learning Chinese inclusive of writing system, unique alphabet, irregular phonemics, non-cognates, unfriendliness in dictionary use, a large percentage of classical Chinese, Romanization based methods, and weird tones. No doubt, weird tones could be considered one of the hardest. Still, there are certain principles that may neutralize the difficulties

Simulating Sounds from the Immediate Environment

To enter the field of Chinese tone pronunciation, for those people who start learning Chinese by Pinyin, it can be more feasible to explore this complete new concept about learning Chinese tone pronunciation from cognitive perspectives. For memory, *Ausubel (1968) contended that i*f two separated parts are isolated and

Therefore, interested instructors along with researchers need to solve such problems by incorporating common elements shared by their native and foreign languages, and borrowing powerful tools in relevant fields of discipline.

without any contrast, they become meaningless unless relevancy between them is created in terms of cognitive structures with some verbatim words. His subsumption theory suggests that learning is a process that creates or consolidates the relations between new material and cognitive structure. On the other hand, *Smith (1975)* proposed "Manufacturing meaningfulness," which is considered a powerful element for learning. According to his theory, if meaning can be given to Chinese tone pronunciation; no matter what definition tone pronunciation may be, or what things in daily life can be, to find a connection with learner's life experience can be helpful in learning to recognize and to learn the tone. With such experiences, learners can apply each tone on every vocabulary they learned after knowing the principle and theory of four-tone pronunciation and manage to imitate and master the glottis.

Integrating the Tone Information with Chinese Character

To integrate the tone information with Chinese character based on the evolution of Chinese character will accelerate the cognition process. One example of Chinese character evolution is illustrated below (e.g.

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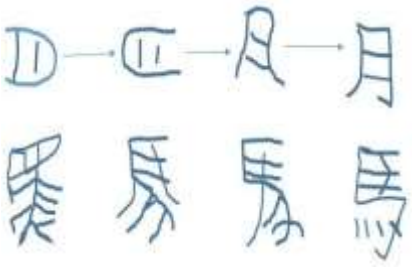
the word “馬”, meaning “HORSE”:

Oracle → Bronze → Zhuanwen →Kaishu



Ancient →transition→ nowadays

As can be seen, the more right-ward, the closer the image to the Chinese character seen today. Inevitably, appearances or outlooks of the character may vary, during the same time frame, as the writers may display calligraphic difference, due to their personal preferences. From the perspective of Zeigarnic effect, the tendency to experience intrusive thoughts about an objective that was once pursued and left incomplete ; man tends to remember better that which is unfinished or incomplete. " (Greist-Bousquet and Schiffman, 1992), learners of Chinese can efficiently strengthen their memory for tone if we slightly change the form of Chinese character. In other words, through slight “transformation” of Chinese character, learners can grasp the tone information clearly and thus able to memorize the tone of the words more with ease, without extra specific notations or remarks. Even in some special cases, such tone information helps distinguish similar, yet easily confusing, characters or words. For example, (the word “烏” on the left, meaning “black”, and the word “鳥” on the right, meaning “bird,”

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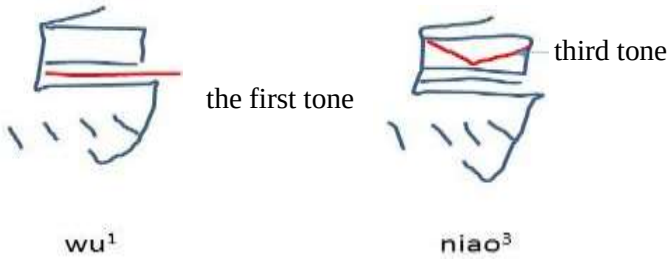
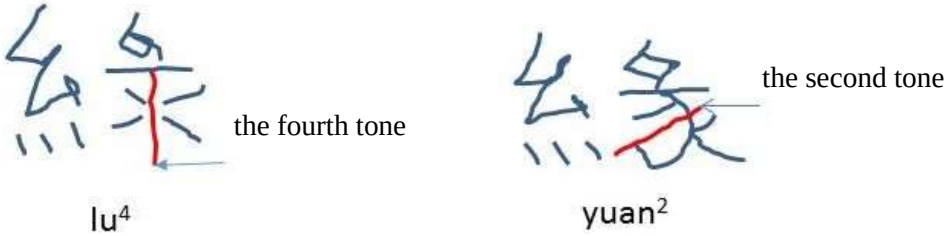


(Wu→pronunciation of “烏-black”, 1- the first tone; niao → pronunciation of “鳥-bird”, 3-the third tone)

Also, in the words below: (the word “綠-green”, and the word “緣-encounter”)



(lu → pronunciation of “綠-green”, 4- the fourth tone; yuan → pronunciation of “緣-encounter ”, 2-the second tone)

Surprisingly, almost all the Chinese characters can display tone information with ease (by slight transformation) without breaking their structures. In short, through the slight transformation of the characters, the tone information can be displayed, and at the same time, without distorting the cognitive process and the image-induced meaning, which can facilitate grasping and learning of the tone information of a target word.

Forming Tone Pronunciation Habit on Collocations or Idiomatic Phrases

Collocations, common terms proposed by most linguists, are the words or terms usually appear with another “accompany” in the same expression. Such an accompaniment helps increase the speed of cognition and learning efficiency in the course of Chinese learning. In fact, the difference between native language and foreign language lies essentially in the knowing number of co-location wording or phrase (Halliday, 1966). Such a reality suggests that when learners know the certain amount of co-location words or terms for one language, reaction to or prediction of that language can be more readily and feasible without hesitation, much like processing or using their native language.

Prompting Acquisition through Notation-Like Linear Variations of Tones

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It is believed that Chao (1948) indicates that there are some similarities between tone pronunciation and music scale variation regardless of whether the structure of Chinese tone is totally compatible with the regulation of temperament. In this case, it can be boldly proposed that the distinction between the tone language and non-tone language is that the former one is similar to music temperament, which is one of the important elements that cause such a distinction. To elucidate such a theory, the "Tone Chart" in combination of the randomly chosen Chinese words ("督" of the 1st tone, "讀" of the 2nd tone, "賭" of the 3rd tone, and lastly "度"-of the 4th tone) introduced below:

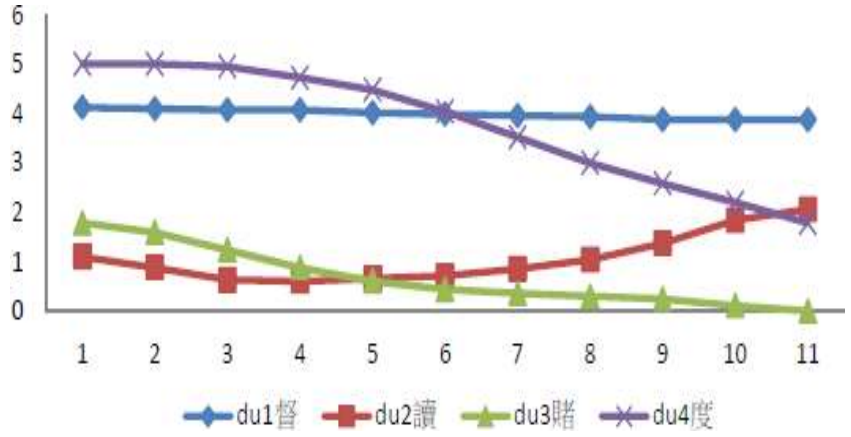

Figure 1 Tone contours of Chinese words 督, 讀, 賭, and 度

And after combine with Chinese sentence will become following chart: (Note the variation of the tones of each word of the Chinese sentence: "真正好吃," meaning "Truly delicious", "真"-1st tone,'正"- 4th tone, "好"-3rd tone, and "吃"-1st tone, or the sentence "你好嗎", meaning "How are you? "你"- 3rd tone, 好-3rd tone, 嗎-1st tone). See below

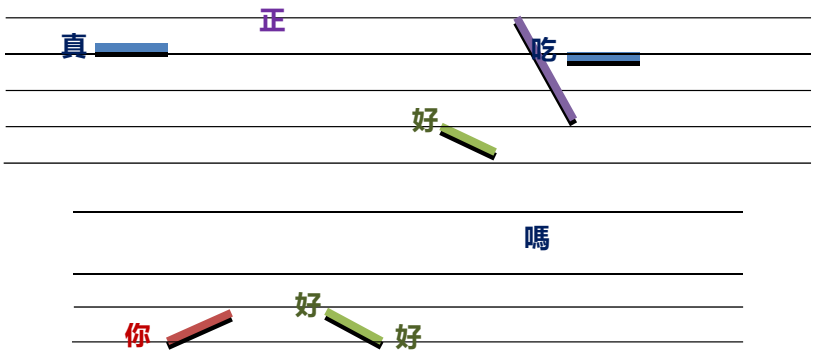

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Figure 2. Tone contours of Chinese sentences

The above presentation and comparison shows an amazing fact: the function of tone variations in Chinese sentences is just like the notes that can affect or decide the pitch of a song. Moreover, tone manifests its regularity and responsibility similar to notes in music. According to this, we can use notation to help learners of Chinese in tone pronunciation, such as teaching a song as part of the instruction. The guidelines for such tone instruction can be listed as follows,

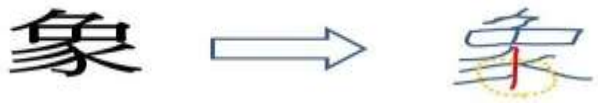
a. Minimum amount of target material is used in each instructional session.
b. Learners need to repeat the same content a few times.
c. Teachers create an environment in which learners can speak the material as loudly as possible.
d. Increase learner's vocabulary and sentence by partial and gradual displacement exercises.
e. Allow learners to digest and absorb what they learned by role playing or drama performance.
f. Encourage learners to exchange ideas or team discussion to expedite the progress.
g. Allow learners to extend learning content according to their individual needs.

Examples

Character transformation. To implant the tone information into Chinese characters as reminders for learner's concerning tone pronunciation. For example, (In example 1 (例 1), the word "羊," meaning "goat," while in example 2, the word "象", meaning "elephant".) Note the tone specification by usingthe strike marked in red.

Example 1:

Example 2:



Prompted by locations of words with similar sound but different tone. To distinguish the word with same sound but different meaning and tones, researchers put all these words in the same area with its corresponding position to show the tone information and to sharpen learner's memory. See Example 3- 例 3 "牙-tooth", and Example 4 -例 4 "兔-rabbit" below.

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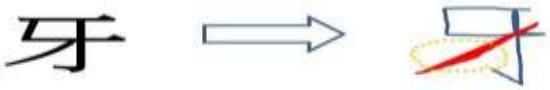
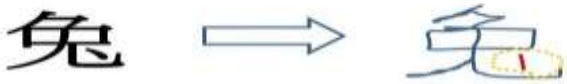
Example 3:

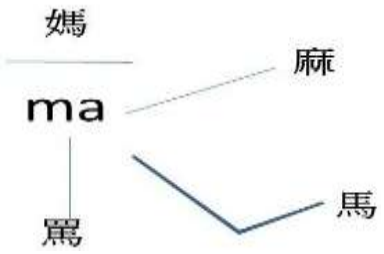


Example 4:



The following examples clear indicate the Chinese Homonyms (with similar sound but different characters and leanings. See the words such as "媽-mother-of 1st tone ", "麻-numb-of 2nd tone", "馬-horse, of 3rd tone, and "罵-scold, of 4th tone) below (Example 5):

Example 5:



Example 6:

Another example of the sound of words pronounced as "yang", "央-area, of 1st tone, "陽-sun, of 2nd tone, "養-foster, of 3rd tone, and "樣-form, of 4th tone. See Example above:

With such an arrangement, learners may form a clear picture about some Chinese words based on the slight differences in their tone variations as indicated by the markers.

Loci of prompt for collocates with different pronunciation. Most of Chinese lexicons are composed of 2-word collocates, regardless of their identical sounds or meanings. Learners can benefit from the sufficient materials used in daily expression, given that the tone problems for common terms (collocates) are solved, and sufficient amount of vocabulary in are installed in their database. For example, the key point to show the first word "月-moon (Yue)" 4th tone of the collocates, is to indicate its tone by transforming the character (with the red vertical line). As for other words in the collocate "經-cycle (jing), 1st tone, "球-ball (qiu), 2nd tone, "老-old (lao), 3rd tone, are highlighted by using corresponding position. See the examples below:

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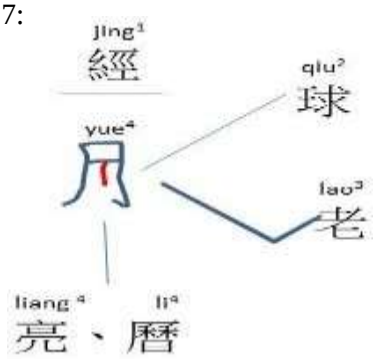
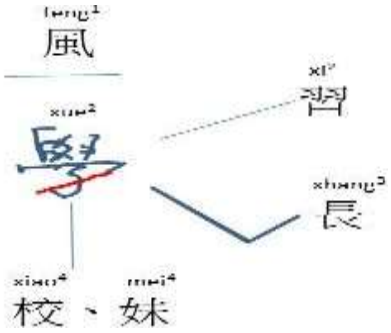
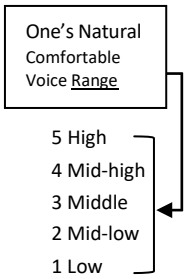
Example 7:



Example 8



Applicaiton of tone variations through staff notes. Through the relative positions of the wordtone, acquisition of tone variations can be more consolidated and specific. The prototype of tone variations can best be illustrated by the staff music note below (Note the Pitch contours)



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The researchers attempt, in this study, to help solve the issues of tone distinctions, highlights of recognition and memory of tone features of each individual words, collocates, or even sentences of any length. Luckily, from existing relevant literature, there are bunches of analyses and spectacular perspectives and findings. As previously mentioned, it is not the lexicon per se but the tone variations that cause the difficulties for CFL (Chinese as a foreign language) learners. And it is only through the practice of tones that the underlying rules/ rationales can be comprehended and elucidated. In addition, practice of tones must be done on sentential level rather than lexicon level, though the latter tends to be regarded as the most relevant issue. Most previous studies focused on the nature of tone variation, or elaborate the function of it from the perspectives of instruction, not on the studies of theoretical exploration. Thanks to the rapid development of internet and computer technology, many websites or apps (application for smart devices) teach Chinese tone pronunciation by voiceprint analysis, through the use of animation or video, but these facilities are still limited within the conventional frameworks.

Undeniably, the findings of this study

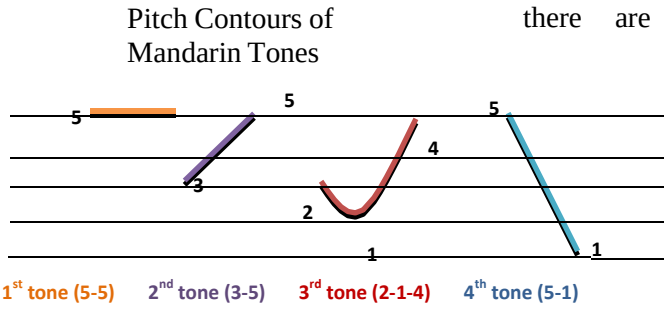

Figure 3. Pitch contours of Mandarin Tones

This "voice correction system of staff notation" can be viewed on PC or smart devices (mobile phone or tablets). It enables learners to speak correct Chinese tone pronunciation by animation in any time and any place. The features of such system are listed below:

1) Innovative tone representation mode makes it easy to learn and to remember
2) Language diversity is highlighted, which facilitates learners' comprehension.
3) Free choice of learning contents, meeting learners' individual needs.
4) Intuitive guides help promote receiving input.
5) Visualization of input strengthens memory.
6) Unlimited repetition of content display enhances flexibility of learning.
7) Incorporation with cloud database helps learners study at any time and in any place.

Conclusion

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may supposedly shed lights on solving the issues of tone variations and render service to those devoted CFL learners who have been suffering difficulties all the way, but still the previous relevant studies in the existing literature are by all means contributive. Meanwhile, the progression of technology & internet allows such innovative approach to have opportunity to spread efficiently, which can be a great encouragement for those researchers who work on removing the learning barriers caused by culture differences. At the moment, with the trend of globalization, researchers hope ultimately that the Chinese language, of great mystery, beauty, and fascination can become the treasure of human beings through the efforts made by researchers to be and former scholars. The most expected visions of the researchers regarding the CFL learners are the smiling faces in their course of learning Mandarin.

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