

**THE STUDY OF THE CHINESE INTONATION IN DISYLLABIC WORDS
BY ROMANIAN LEARNERS**

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Abstract: *With the goal of finding more feasible and effective teaching strategies for Chinese intonation acquisition for Romanian learners, this article explores the bias in Chinese disyllabic words by Romanian learners of the Chinese language. By means of the contrastive analysis and the phonetic software Praat, the intonations in Chinese and Romanian linguistics are visualized in order to make the necessary comparisons for identifying the causes of the bias. Considering the Romanian language pronunciation characteristics and the causes of the usual intonation bias by Romanian learners, several teaching suggestions are hereby put forward: utilizing the phonetic software, forming and emphasising the Chinese intonation system sustainably, reducing the negative migration of the native language, and further scientific pronunciation practice.*

Keywords: *Chinese intonation, linguistic contrastive analysis, disyllabic word, Praat;*

1. Introduction and literature review

Compared to most European languages, one of the most particular characteristics of the contemporary mandarin Chinese is the four intonations in suprasegmental aspects, which include rhythm, stress, and tones in language pronunciation (Kota 2012)¹. Phonetics is the foundation of a language, and it is the foremost section learners have when starting to learn a new language. The study of intonations in the Chinese language has an indispensable role not only in pronunciation but also in listening, Chinese character writing, and communication. In the modern Chinese language, there are 4 tones and one neutral tone. The four tones in Mandarin Chinese, respectively, refer to the Yinping, Yangping, Shangsheng, and Qusheng, established after a long period of evolution. In the process of pronunciation teaching and training, the 4 tones are regarded thusly: the first tone is Yinping, the second tone is Yangping, the third tone is Shangsheng, and the fourth tone is Qusheng (Liu et al. 2020:48-64). The rising and falling of the pitch and the timing of the sound make up the tones of the Chinese language. Yinping is a high flat tone (not rising, not falling); Yangping is a medium rising tone (pitch is not high, not low); Shangsheng is a falling-rising tone; Qusheng is a high falling tone (Schack 2000: 24-55).

Many linguistic and philological researchers have emphasized the importance of intonations for learners. Considering the basic function of communication for a

¹ Ohata KOTA, *Phonological differences between Japanese and English: Several potentially problematic areas of pronunciation for Japanese, ESL/EFL learners*. Niigata, Asian EFL Online Journal, 2012, pp. 9

language, the intonations in Chinese can decide the effectiveness of the study. With Chinese intonations, the meanings of words are presented and understood so as to satisfy the information exchange (Peng et al. 2021: 88–99). The mistakes in Chinese intonations can result in the misunderstanding of information. As the importance of intonations in the Chinese language, the teaching of intonations in Chinese study activities presents significances, as well as challenges. Through the comparison of disyllable word pronunciations between the Chinese and Romanian languages by means of the software Praat, Romanian learners can better understand their mistakes in Chinese pronunciation.

In more recent decades, in order to improve the quality of teaching Chinese phonetics to foreigners, many Chinese intonation studies have been implemented. Incorrect Chinese pronunciation can result in incorrect grammar, and it can continuously negatively influence the expression. The learning of intonations is particularly important, as part of the larger process of Chinese phonological learning, because Chinese intonations have the function of making distinctions between the meanings of the words (Reng 2021:173-183). The Chinese intonation is the most significant challenge for most learners who strive to handle Chinese phonology well, and learners have different types of biases, regardless of whether their mother tongue is a tonal or non-tonal language (Mai et al. 2022). Learners of non-tonal languages are not aware of intonations and are unable to distinguish between the four tones. In addition to the reason for the learners' lack of awareness of intonations and their failure to establish distinguishing features, intonation variation in actual speech is also a critical factor limiting phonological study (Bai 2013: 97-104). The learners whose mother tongues are not tonal languages were still overwhelmed by the pronunciation of phrases and sentences, even after they could pronounce the four tones very well (Chen & Huang 2021: 75-81).

As a non-tone and syllable-timed language, the Romanian language is very different from the Chinese, with respect to pronunciation. Compared to the study between Chinese and other European languages, there are very few studies on the acquisition of Chinese intonations by Romanian learners. For native speakers of Romanian, the main challenge in learning the Chinese language is raised by their lack of awareness of intonations or the issue of forming a correct perception of intonation. The core of the intonation issue lies in the inability to establish a strong and correct connection between syllables and intonations. The Romanian language, like other European languages, is alphabetic writing. The connection between pronunciation and writing in hieroglyph writing is the main obstacle for most Romanian learners. This ignorance or the unawareness of intonation in Chinese can lead to certain issues in their study of the Chinese characters. Romanian learners make the same types of errors as learners of other languages whose mother tongue is a non-tone language (Song 2019:143-147). It is found that Romanian learners are usually insensitive to pitch and make tonal range errors. The bias includes low tuning values and confusing tuning fields in the Chinese pronunciation, a conclusion that was drawn after investigating Romanian native speakers in Moldovan at both static and dynamic levels, through auditory and acoustic experiments.

2. Methodology

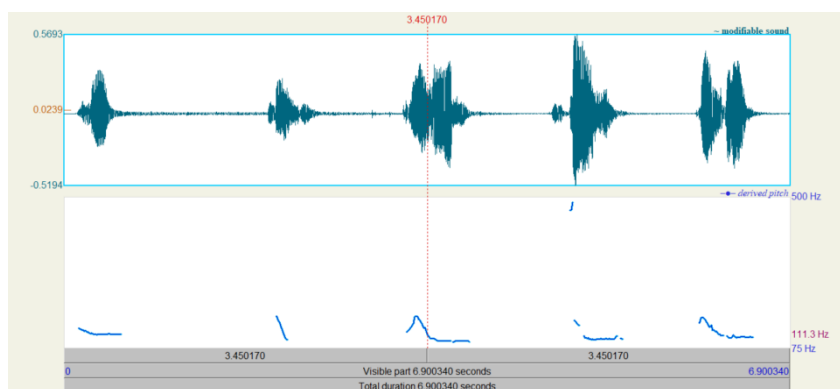
In this article, I utilized the contrastive analysis to make a comparison between the tones of Romanian and Chinese disyllable words, in order to establish the differences between the two, and to further explore the means by which to improve the teaching methods for the Chinese intonation. The contrastive analysis is deployed as a methodology to conduct the comparison of two or more languages to determine the differences or similarities between them (Ara 2021: 79-83). It is particularly suitable for research in the process of second language acquisition. People tend to transfer the grammar, rhythm, stress, and intonation in pronunciation from their mother tongue and culture to the target language. Contrasting the target language with the mother tongue and identifying similarities and differences can therefore lead to an understanding and even a prediction of the biases that learners are likely to make. Contrastive analysis theory is divided into a strong hypothesis and a weak hypothesis. The strong hypothesis states that similarities between the target language and the mother tongue have a positive transfer effect on the acquisition of the second language and may help learners to acquire the second language, while the differences between the two languages have a negative effect on the learning process and hinders the acquisition process. What can thus be interpreted is that the difference between languages leads to difficulty, and the difficulty results in bias. The weakness hypothesis states that comparison is not for the purpose of a simple prediction, but rather a contrastive analysis of the learner's errors, followed by an explanation of these errors from the perspective of linguistics and philology. The aim of the phonological-based contrastive analysis is to understand the various physical properties of pronunciation. In terms of the physical properties, pronunciation is an acoustic wave with various acoustic-physical characteristics, including frequency, amplitude, pitch, intensity, and timbre, which can all be compared and analysed using acoustic physics methods.

In order to obtain a visual analysis of the intonation between Chinese and Romanian disyllable words, as well as the visual intonation bias in the case of Romanian learners, the phonetics software Praat was used. Praat is a cross-platform, multi-functional phonetics professional software mainly used to analyse, annotate, process and synthesize digitized speech signals for experiments while generating various speech maps and text reports. This software is used to obtain the pitch contours of Chinese and Romanian disyllable words, followed by a comparison. It is the technical support for the contrastive analysis to study the intonation bias by Romanian learners.

3. The disyllable words intonations comparison between the Romanian and Chinese languages

With the purpose of having a visual understanding of the Romanian disyllable word tones, 5 Romanian disyllable words were randomly chosen, which are *bună*, *cinci*, *vineri*, *masă*, *umblă*, and I used the Praat to draw the pitch contour. From fig.1, we can note that the tone for the Romanian disyllable word is very close to the Chinese fourth tone, the Qusheng, the high-falling tone.

Fig. 1. The phonetic analysis of Romanian disyllabic words



Because of this tone or common phonetic habit in Romanian pronunciation, the other 3 Chinese tones are not easy to study or are difficult to pronounce, despite the learners having abundant theoretical knowledge. Another feature in Romanian phonetics is that the stress of a disyllable word is at the first syllable, which can influence the Chinese disyllable word. In spite of the first syllable being which tone, Romanian learners find it easy to pronounce them as the fourth tone. Because of the Romanian language tones, as well as the unawareness of Chinese intonation, problems arise in the Chinese intonation study.

It is vital to understand the change of pitch in Chinese intonation. Generally, the first tone is marked for the learner with the beginning point and the endpoint, maintaining the sound at the pitch between the two points for one or two seconds. The second tone is marked with two points, the latter one higher than the former one, with an upward change. The third tone has three points, one at the beginning, one at the end, and one at the turning point, with a descending tone before the turning point and an ascending tone after the turning point. This is the most common and traditional method in teaching the four Chinese intonations. Theoretically, it is believed that learners can pronounce Chinese rather well after all four tones have been introduced. However, in actual teaching, the practice of the new language pronunciation is more important than the understanding of the theories. Romanian learners not only need to train their minds to become used to the rhythm, sound, intonation, and speech flows in a foreign tone-based language, but also the muscles in the mouth and tongue demand time for these changes brought by the

Chinese language. Thus, frequent pronunciation exercises can lead to the correct and native-like Chinese pronunciation.

	First tone " — "	Second tone " / "	Third tone " ∨ "	Fourth tone " \ "
First tone " — "	1+1	1+2	1+3	1+4
Second tone " / "	2+1	2+2	2+3	2+4
Third tone " ∨ "	3+1	3+2	3+3	3+4
Fourth tone " \ "	4+1	4+2	4+3	4+4

Table. 1. The 16 combination results of Chinese disyllabic words

The Chinese four tones can have 16 combinations which are presented in the Table.1. Based on the visual pitch contours of the comparison between the Chinese standard tones and the Romanian learners' pronunciation and the degree of the correctness of the tones, I divided the 16-tone combinations into three groups: the serious bias group, medium bias group, and the understandable tone group. The result is as follows:

The serious bias group	1+1, 1+3, 3+4, 4+1, 4+3, 4+4
The medium bias group	1+2, 1+4, 2+3, 3+1, 3+2
The understandable tone group	2+1, 2+2, 2+4, 3+3, 4+2

Table. 2. The classification of the Chinese disyllabic words bias

The main reasons for the intonation mistakes are the native language's negative migration and the lack of Chinese intonation awareness. There are many Romanian words that start with vowels, and this feature makes the liaison become very popular in Romanian speech flow. And the liaison makes the tones in the Romanian speech flow almost in the same manner. When Romanian learners attempt to follow the Chinese tones, the difficulty lies in the attempt to find the beginning point of the pitch, and the change of the second syllable is also hard to achieve, which results in the foreign Chinese tones. The pitch starting point and the actual tone starting point made by the pronunciation muscles are not the same. Moreover, teachers do not focus on the intonation during the teaching process, which also results in weak and confused awareness of the tones.

The establishment of the awareness of the tones in Chinese is critical for international students to establish a system of reflecting and receiving feedback on tone instructions. As Romanian is a non-tone language, learners need time to gradually distinguish tones and are easily influenced by the stresses in the mother tongue, which indicate changes in tone intensity instead of the different tonal values. Learners often confuse the beginning and end points of the four tones. A misconception is that the second tone is all the way up, the third tone is from high to low and then higher, and the fourth tone is down, which can result in bias in speech flow. The first tone keeps the pitch in a high degree parallelly, and the fourth tone falls from the beginning point of the first tone. The second and third tones do not exceed the pitch area of the first and fourth tones. There is not only a rising and a falling in the tones, but also the concept of high

pitch and low pitch. Once learners form a basic understanding of tones, they realize the importance of tones. This can be done by adding different tones to the vocabulary so that learners are aware that the same vowel and rhyme with different tones can have very different meanings.

With the impact of the Romanian language, Romanian learners are usually insensitive to the boundaries between words in the flow of speech and string the pronunciation altogether, resulting in a sharp tone. Chinese, however, is a tonal language, but the intonation of Chinese can also be influenced by speech flow. The first tone is easy in single-character tones, but it can be confusing to learners when it appears in disyllable words. Chinese also has different tones depending on the emotion. Whereas single syllable tones as static tonal values are easy, the disyllables, as the basis for coherent discourse, are not simply a superposition of two single syllables, but interact to form new phonetic features. It is, therefore, particularly important to practice disyllable words in speech. Chinese teachers tend to focus on teaching tones with the single syllable, believing that if learners learn to pronounce single-syllable tones correctly, they will naturally pronounce disyllable tones, which results in learners being better at single-syllable tones than the disyllables. The Chinese intonation teaching should be based on both single-syllable memorization and disyllable practice.

4. Suggestions

Most of the Chinese language courses in Romania do not focus on Chinese intonations, thus the learners do not acquire Chinese intonations in a Chinese environment and have little chance to practice. Most Romanian learners are not aware of the importance of intonations and are unsure whether they can distinguish them. Some learners who have been learning Chinese for more than a year are still unable to pronounce the intonations accurately. The persistent intonation bias is difficult to correct. In addition, teachers focus on the phonetic rules of tone and syllable spelling in the classroom but do not pay attention to correcting intonation bias. Although there is a wide variety of Chinese teaching materials available on the market nowadays, many materials are unsuitable for Romanian learners. Very few Chinese language textbooks pay enough attention to the phonetic part. The most commonly used Chinese textbook *HSK Standard Course* and it does not show or introduce the specific characteristics of each tone in detail - the intonations make up very little of the textbook. It is difficult for learners to practice the intonations on their own, merely using the textbook. The class time is too short for proper practice. The neglect of initial intonation teaching and insufficient pronunciation practice result in bias in Chinese speaking.

Based on the research on the Chinese disyllabic words intonation and the visual pitch contour by the software Praat, as well as the problems emergent from actual teaching, there are several suggestions for practical intonation teaching.

a. Intonation teaching with the assistance of phonetic software

Frequent and repeated listening and reading practice is the best way to learn a language in an efficient way. By using software, learners can correct their pronunciation

in real-time, in a visual way, which facilitates independent learning. The software can clearly visualize the tonal patterns and the correct pronunciation, depicting the comparison between the correct version and the learner's tone, rhythm, and stress. Moreover, phonetic software is feasible and may be taken into account for self-study and re-study after class, for further practice.

b. Enhance and sustain the intonation teaching

The teaching and practice of Chinese intonation should be emphasised throughout the teaching process. After a clear explanation of the four tones of the basic elements of pitch value, range, and sound duration in detail, the detailed exercises should be designed and conducted repeatedly over the entire study process. The establishment of a strong awareness of Chinese intonation should be mentioned early on, so that learners can develop awareness and become sensitive to the tones in every character. In addition to the five-degree method of tonal marking, more practical training can be added, for the sake of periodic reinforcement, until learners take the tones seriously. The first tone is a high flat tone; the second tone is a medium rising tone; the third tone is a descending and rising tone; the fourth tone is a full descending tone. All of these theories should be clearly and firmly understood by learners early on in the tone teaching process. One solution would be the design of more interesting and practical tone exercises in the class by using diverse materials to enrich the phonetic content. Another effective method is to enhance the comparison between the Chinese and Romanian phonetics with the support of acoustic software, which can make the difference more obvious and understandable. It is important to increase not only the intensity of the exercises but also their variety and potential for enjoyment. Imitation practice and shadowing exercises are quite practical and efficient in acquiring Chinese tones. Beginners can listen and imitate simple recorded words and phrases. Intermediate and advanced learners can watch Chinese TV dramas and listen to Chinese radio as sources of imitation. Other activities, such as film dubbing and speech competitions, can be organized to encourage learners to pay more attention to the intonation study.

When setting the objectives of teaching Chinese phonetics, teachers usually consider that once learners know the rules of Chinese phonetics, the tones are no longer the main part of the study endeavour. After the basic knowledge of tones, there is little or no need to correct tonal errors. From the earliest stage of tone learning, learners should be helped to build up a comprehensive and sensitive phonetics system through repetition and reinforcement, reducing the errors in tones and prosody perception. Once a sense of intonation has been established, it is important to keep up with the correction of intonation errors, so that learners can continuously be aware of the intonation. The teaching of Chinese as a foreign language is based on the principle of intensive teaching and practice, and without a lot of practice, knowledge cannot be internalized and it could face several problems in its more in-depth study. Therefore, the teaching of tones should not just be the content of one lesson, nor should it be the content of the introduction to Chinese learning; it should be taught throughout the study process.

c. Reducing the influence of the negative migration of the mother language

Many Romanian learners have a multi-language background, while the languages are usually European non-tone languages. The already existing phonetic system will create the Chinese intonation bias. The tone bias by Romanian students can be summarized to improve teaching efficiency and to minimize the negative migration of the Romanian pronunciation rules. Romanian learners are usually able to speak more than two languages, and the different language phonetics can make Chinese tone learning more challenging, as people are used to remembering the new sound or tone with their already known pronunciation. By knowing more phonetics about the Romanian language before teaching, teachers can anticipate misconceptions and can explain them in advance, thus preventing preconceptions and misconceptions. When learners make errors, they should realize and understand the causes and correct them in a timely and efficient manner.

5. Conclusion

As a typical tone-based language, the four tones in Chinese phonetics play a critical role in determining the word's meaning, emotional expression, and communication efficiency. For Romanian learners, it is a challenge to establish a sensitive and practical intonation system at the beginning, because of the absence of intonation awareness and because of the influence of the mother language's phonetic system. For teachers and learners, Chinese tones are a vital part of in continuous study.

Compared to single-syllable Chinese words, disyllabic Chinese words are more challenging. Based on the constrictive analysis theory and the use of the phonetic software Praat as methodology, the reasons resulting in the Chinese disyllable bias are researched in this article. As in the case of the Romanian disyllabic words, the tones are all similar to the Chinese fourth tone, learners need time and practice to form their Chinese intonation awareness, especially for the combination of two tones and in speech flow. For the 16 combinations of two tones, according to the standard level of pronunciation by Romanian learners, they are divided into three groups. For the serious bias group, learners should pay more attention, and teachers can emphasize more during teaching. The main reasons for biases can be outlined as the negative migration of the native language and the native culture, biases caused by perceptual errors, and the influence of external factors. The influence of external factors includes phonetic teaching methods, teaching materials, and insufficient practice.

In order to improve the Chinese intonation teaching effects, several suggestions were made in the present paper, including: the use of phonetic software, the enhancement and consistent teaching of enhance intonation throughout the learning process, and the reduction of the influence of the negative migration of the mother language. Teachers must obtain a considerable amount of information on the Romanian language phonetics and must continuously make comparisons between the two languages, so as to help learners avoid the common mistakes. Learners can attempt to form a sensitive and sensitive Chinese intonation system after practice and must maintain their focus on

Chinese tones over the entire duration of their studies. God helps those who help themselves. The more one practices, the closer one gets to perfection.

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