

Kirundi Tones and Their Negative Influence on Mandarin Tones Acquisition

Mathieu BAMPORUBUSA

Department of Africa and Indian Ocean, National Institute of Oriental Languages and Civilizations, France.

Corresponding Author: Mathieu BAMPORUBUSA, Department of Africa and Indian Ocean, National Institute of Oriental Languages and Civilizations, France.

ABSTRACT

This study intended to investigate tonal difficulties encountered by Burundian learners of Chinese. This choice was motivated by the fact that Kirundi and Chinese are both tonal languages and thus might have the same tonal features. However, as Kirundi native speaker, when I was studying Chinese, I encountered difficulties relating to tones, and those difficulties persist. An experiment was carried out on 30 Burundian students in Wuhan, whose mother tongue was Kirundi; all of them had studied Chinese before they began their master's programs. Participants were asked to read 30 Chinese words carrying different tones while the sounds were being recorded. Chinese native speakers helped to judge the accuracy of their pronunciation. It was found that Kirundi tones affect Chinese tones. However, the age did not significantly show considerable influence, for there was no great difference with regard to ages of participants. The result showed that although Mandarin tones are difficult to learn, yet with a help of local Mandarin teacher and constant practice, students can learn them.

Keywords: Tone; Chinese; Kirundi; L1 Transfer; Tonal Language.

ARTICLE INFORMATION

Received: 03 May 2026

Accepted: 15 May 2026

Published: 18 May 2026

Cite this article as:

Mathieu BAMPORUBUSA. Kirundi Tones and Their Negative Influence on Mandarin Tones Acquisition. *International Research Journal of Language, Literature and Culture*. 2026; 1(2): 28-37.

<https://doi.org/10.71123/irjllc.v1.i2.2604>

Copyright:©2026. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Introduction

Kirundi is a Bantu language spoken by all Burundians (about 11 million people), it is a national and official language in Burundi. The latter status is also attributed to French and English. Unlike Kirundi, Chinese belongs to Sino-Tibetan family of languages. According to Duanmu (2006), Chinese is the L1 of more than one billion people. Since there are so many Chinese varieties and dialects such as Mandarin, Wu, Cantonese and Min, which are not all mutually intelligible (Na, 2010), the study will focus on standard Chinese known as Mandarin or Putonghua. The investigation into phonological problems faced by Burundian learners of Mandarin will focus on tones. Tonal languages constitute 70 % languages that exist in the world (Yip, 2002). Among these tonal languages, Chinese seems to have complicated tones. It is characterized by four tones distinguished as first tone, second tone, third tone and fourth tone. In contrast, it is generally believed that Kirundi like

other Bantu languages uses a two tonal system classified as High (H) and Low (L) (Ndayishinguje, 1978).

In tone languages, tones are more important for understanding aspects of grammar as described in phonology, morphology, syntax, semantics and pragmatics (Akinlabi & Libermann 2000). Thus, the mastery of tones is crucial in the acquisition of tonal languages. Ioup and Tansomboon (1987) pointed out that tone is one of the earliest aspects of the sound structure acquired by children, these findings were confirmed by Orié (1997). However, tone poses a tremendous challenge for L2 adult learners whose L1 is non-tonal (Kirilloff 1969, Bluhme and Burr 1971, Shen 1989). For example, Gottfried and Suiter (1997) highlighted that speakers of American English experienced little difficulty learning vowel quality of Mandarin, but they had little success in tones acquisition. Do Burundian students who are tonal language native speakers (Kirundi) have any difficulty in learning Chinese, a tonal language?

Chinese language is increasingly being taught all over the world. In Burundi, there has been Confucius Institute since 2011, and it is functioning very well because Burundian youth as well as adults are benefiting from knowledge offered in Chinese language and culture. Apart from this, a great number of Burundian students go to study in China. In China, many students study Chinese language first. When learning Chinese as a foreign language, inaccurate tone production has long been recognized as a widespread and important problem in building communicative competency for non-native speakers. Even though Burundian students are native speakers of Kirundi (a tonal language), the acquisition of Chinese tones do not occur in a high speed as in the case of native speakers. In contrast, some study (Hao 2012) highlighted that L2 learners with a tonal native language perform no better than those with a non-tonal native language.

So, do prosodic structures of Kirundi language affect the Second Language Acquisition of Mandarin tones?

Mandarin Chinese is a well-known Asian tonal language, and the tone co-articulation in Mandarin Chinese has been a controversial matter for a long time. A word like “ma” can have more than six different meanings, depending on tone variation. Many African and European learners of Chinese find this really difficult to comprehend. Fresh learners of Mandarin Chinese usually find tones confusing and hard to learn. This may lead to negative experience of frustration, disappointment and neglect.

As one who has learned elementary skills of Chinese language such as listening, speaking, reading and writing, I have discovered that Chinese language could be classified into the group of the most tedious languages to learn because of its phonological system compared to Kirundi. For a Burundian student, apart from some sounds in Chinese (in pinyin system) which are hard to pronounce, there is a problem relating to tones. This is because Chinese tones are different from Kirundi ones, and this difference will make the whole process of learning more difficult.

It is expected that this study will make a contribution to the fields of Applied Linguistics, Phonology and Second Language Acquisition. The study will help Burundian learners or users of Chinese to identify tonal problems they encounter while learning Chinese language. It will make them to overcome negative influences of their mother tongue on Chinese. Likewise, it will help teachers of Chinese language in China and in Burundi to be aware of the problems faced by Burundian learners of Chinese. Diagnosis of the disease is a half to cure it. Teachers will find better solutions in teaching Chinese language in general and tones in particular. The present study aims at investigating how Kirundi speaking hinders the acquisition of Mandarin tones.

Methodology

Participants

Participants to this study were 30 Burundian students (25 boys and 5 girls) aged 19-33. All the students were studying in Wuhan and were all native speakers of Kirundi. Those participants were Burundians who have studied Chinese using “Building Chinese through Listening and Speaking” written by Wan Ying and Li Xiao Xian (2013). New Burundian students were excluded from the sample. However, as I was aware that some universities in Wuhan were using different books rather than the one I mentioned above in teaching Chinese language, I ought to select some frequently used and taught words, for example: nan, ren, qing, da, hen hao, xuexiao, yingwen, guojia, among others.

Measurements

In order to test tonal problems, I prepared 15 monosyllabic words and other 15 disyllabic words. The combinations of morphemes in disyllabic words were chosen according to two bases:

-Identical tones (i.e. T1+T1, T2+T2, T3+T3, T4+T4)

-Non-identical tones involving tone sandhi, and other sequences like T1+T2, T4+T2, T1+T4, T2+T3, T3+T2, T2+T1, T4+T1, T2+T4.

Note that some combinations, especially those bisyllabic words carrying tone sandhi, were done with words selected from those 15 monosyllabic words.

The experiment words were in a randomized order on the list. They were transcribed in the Pinyin system of Romanization. The tonal diacritics were also used so that the students would not have to resort to guessing the proper tone of words which they may have forgotten. The Chinese characters of the sentences and the English translation were also provided to the participants on the reading list. All of these measures were used to aid in the ease of the students’ reading and to insure that they would not feel intimidated by the task.

Recording

Before reading test words, each participant had to introduce himself without saying his exact name, and this would help me to recognize who said what after recording. In this perspective, each participant was given a letter of alphabet as name, e.g.: A, B, C...Z. As I had 30 participants while there are only 26 alphabets in English, I had to add others for those 4 participants remaining. In order to maintain order and to facilitate the task of the judges, the 27th-30th participants were respectively named ZA, ZB, ZC, and ZD. Other identification elements on the participants were asked after the recording and were put in block note.

Those elements were: his real name, his age, how long the participant has been living in China; how long he has been studying Chinese language; whether Chinese is the teaching language or not in his program.

30 subjects' tonal productions were all recorded in SONY sound recorder, and were after saved in my personal computer. For the judgment, I copied those sound files into two different USB keys that I gave respectively to my two judges.

Judgment

All these recorded sounds were presented individually to two native Chinese speakers, who listened to them and judged whether the pronunciation was the same as the target pronunciation (marked as 'correct') or not (marked as 'incorrect'). For the incorrect productions, the actual sound produced by subjects was also written down for statistical analysis. The more native speaker judges they are, the more accurate the evaluation of tone production will be. I therefore opted to choose two native speakers as judges. Those native speakers were my classmates in Foreign Linguistics and Applied Linguistics department. In order not to collaborate while judging, I consulted those judges separately, so that they would not be influenced by each other. In order to facilitate the judgment and the statistical analysis, all test words were transcribed on papers with identification (alphabetic letter) code as above mentioned according to the number of participants. For the judgment, each native speaker was asked to put the USB key which contained the sound files in his computer and then listen to them, while using a pen or a pencil to mark "correct" or "incorrect" on the paper on which were written the test words.

The two Chinese native speakers listened to every sound file and judged whether the tone was well produced or not. As a result, 450 tones on monosyllabic words, and

900 tones on disyllabic words were judged by the two native speakers respectively in this study. The task took time because, each judge was asked, for the incorrect productions, to write the Chinese tonal productions the actual sound produced by subjects. After judging, I was given results in order to continue with the analysis.

Method of data analysis

The data were analyzed by the use of tables and percentage. Percentage scores were computed by multiplying the number of tone errors by hundred and then dividing the sum with the summation of frequency of the total consistent judgments.

$$\text{Formula \%} = \frac{T}{FR} \times \frac{100}{1}$$

T = Total number of errors.

Fr = Frequency of the total number of consistent judgments.

Furthermore, in order to realize how Kirundi tones affect the acquisition of Chinese tones, and to explain why my research results do not fit with the universal Tonal Markedness Scale (TMS), Praat Software was used.

Results

There are 374 wrong tones in total according to the judgments by the two Mandarin native speaking raters in the experiment. The wrong tones are 29.4% out of 1272 total judgments (excluding the inconsistent judgments¹) while those 898 correct tonal productions are 70.6% out of the total consistent judgments in the experiment. The main analysis and discussion in the following part will focus on these misproductions, including the distribution and the phonological reasons why native Kirundi speakers make these misproductions, etc. The error rates are shown in Table below.

Table 1. Error rates across four tone types in the experiment

Tone types	Total consistent Judgments	Error numbers	Percentage of errors
T1	286	91	31.81%
T2	371	126	33.96%
T3	256	67	26.1%
T4	359	90	25.06%

There are 78 inter-rater inconsistent items out of 1350 judgments in the experiment. Among the 78 inter-rater inconsistent items, 36 inconsistent are correct or wrong inconsistency, which is only 2.66% out of the total judgments. That is, the two native speakers have different judgment, correct or wrong, for these 36 items. The other 42 are out of inventory misproductions, which are 3.11% out of the total judgments. For example, a target T2 is wrongly produced, and it sounds like a middle level tone which is not a Chinese lexical tone, or the judge is completely at a loss as to what tone type it is. Sometimes, the judge decided to put a question mark or to write the word without tone.

As shown in the above table, we find that T2 has the highest error rate, T1 has the second highest error rate, and the third tone is the third with the highest error rate while T4 has the lowest error rate.

Discussion

There is a universal, phonetically grounded markedness scale: *R >> *F >> *L (as cited in Hyman & VanBik, 2004) which indicates that rising tones are more disfavored by speakers than falling tones, which are more disfavored than level tones. Studies of L1 Acquisition carried out by Li & Thompson among others (1977) revealed that Mandarin speaking children acquire T1 first, then T4, then T3 and T2, which fits with the universal Tonal Markedness Scale (TMS).

Likewise, over the past several decades, many researches from a wide range of perspectives have been conducted on Mandarin Chinese tone acquisition by L2 learners of Mandarin (Chen 1997; Elliot 1991; Hao 2012; Kiriloff 1969; Leather 1990; Miracle 1989; Shen 1989; Sun 1997). Even though their findings vary, these researchers agreed that the orders of perception and production are not exactly the same. These studies raise an important question: What is the most demanding aspect of tonal acquisition? Various researches agreed that difficulties faced in tonal perception differ from those faced in tonal production. The largest part of researches indicated that T2 is the most challenging tone for learners to perceive. However, concerning production, there is no such agreement. Findings varied, although many agreed that both T2 and T3 are difficult to produce.

In this perspective, according to the error rates across four tone types in the experiment, as shown in the previous

Table 2. *Inventory of lexical tones of Kirundi*

Tone types	Inventory	Graphic representations	Examples
Register tones	L	a	Umugabo “a man”
	H	á	Umugóre “a woman”
Modulated tones	HL	áa	Umwáana “a child”
	LH	aá	Umwaámi ” the king”
	HH	áá	Twéése “all of us”
	LL	aa	Umutaama ”an old man”

I am going to show how Kirundi tones affect the acquisition of Mandarin Chinese tones, and to explain why my research results do not fit with the universal TMS. It is

part, Burundian learners of Chinese Language get facilities in producing T4, T3, T1, and T2 respectively. Observing this result a question will appear: why doesn't this result fit with the universal TMS? In order to get answer to this question, I will refer to features of Kirundi tones.

Kirundi is a tone language. There are two essential tones in Kirundi: High (H) and Low (L) ones. In its phonological representation, Kirundi, like the other languages of the same typology such as Paicī, Shona, Cewa, Yao, Xhosa, etc., has only one distinctive level of pitch, the high tone; the low tone is assigned by default to flat syllables (syllables without tones) (Hyman, 2000).

Still at the phonetic level, we also mention the middle tone which would be the realization of a L tone that precedes the high tone (Meeussen 1959). It seems to us, however, that it is difficult in this context to talk about Middle (M) tone because its existence depends on the presence of the H tone in the word. The presence of the H tone has the effect of raising the previous syllable. The middle level is phonologically irrelevant, it ensures the melodic transition between H and L levels; which seems to explain its name of “preparatory tone” by Meeussen (1959).

The tonal system of Kirundi also distinguishes the register tones and modulated tones. Several tonal notations have been proposed. The tonal notation I use in this work has been proposed by Meeussen (1959).

We realize that if we count 4 tones in Chinese language, we only have two in Kirundi H and L which can be distinguished in register tones and modulated tones as stated in the table below 2.

therefore fundamental to analyze some Mandarin Chinese and Kirundi words with Praat² Software.

²Praat Software is a computer Software package for the analysis of speech in phonetics. In addition, it supports speech and articulatory syntheses. This Software has been designed and still being developed by Paul Boersma and David Weenink (2012) of the Amsterdam University.

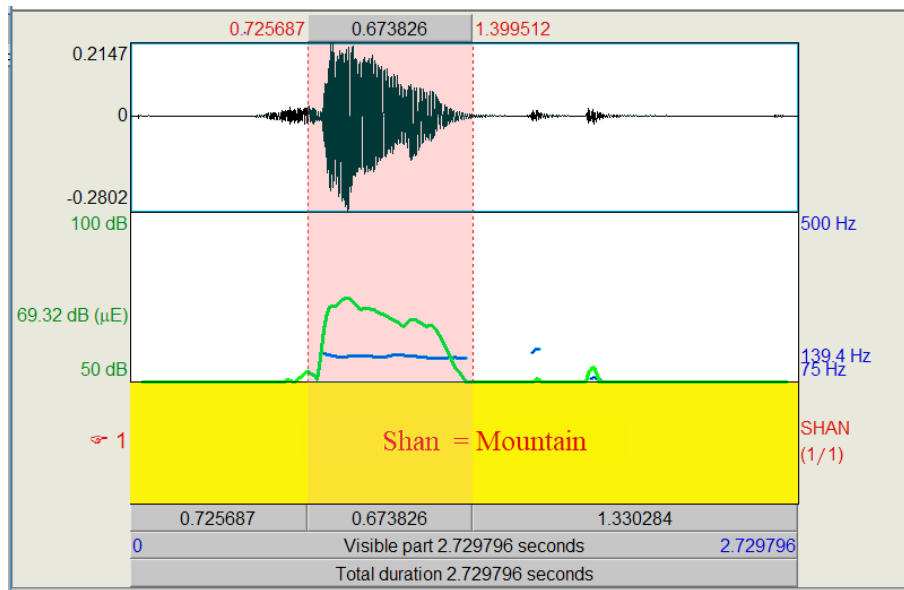


Figure 1. Phonological transcription of "Shān"

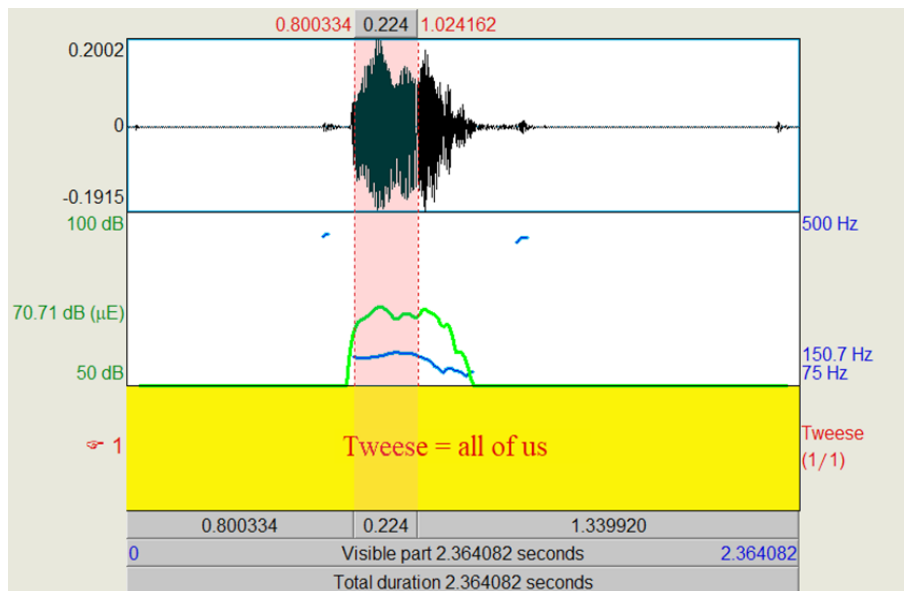


Figure 2. Phonological transcription of "Twéese"

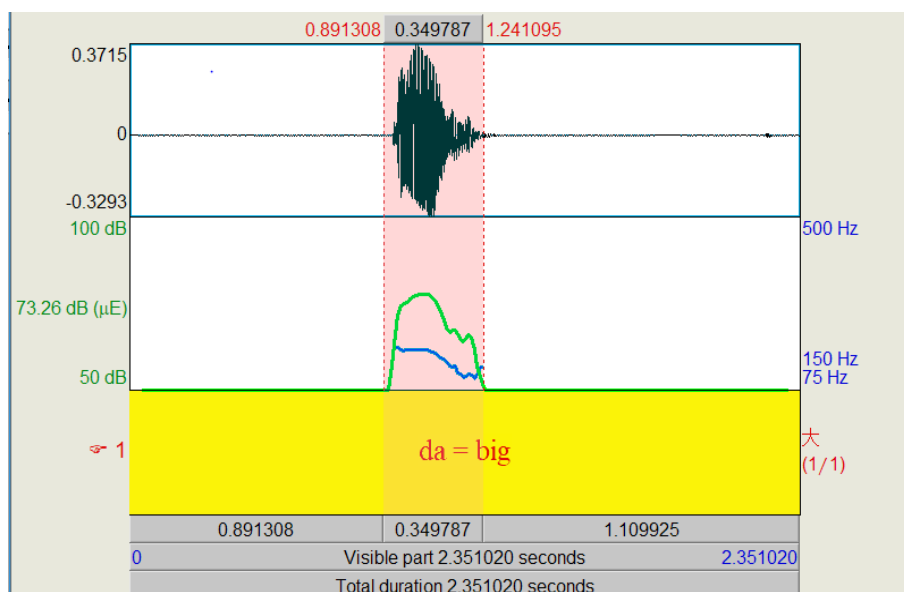


Figure 3. Phonological transcription of "dà"

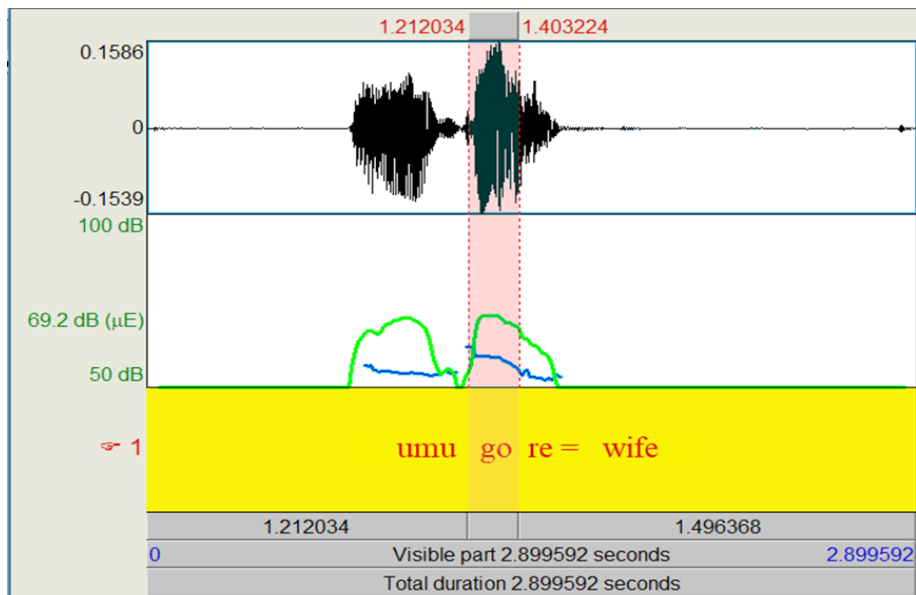


Figure 4. Phonological transcription of "umugóre"

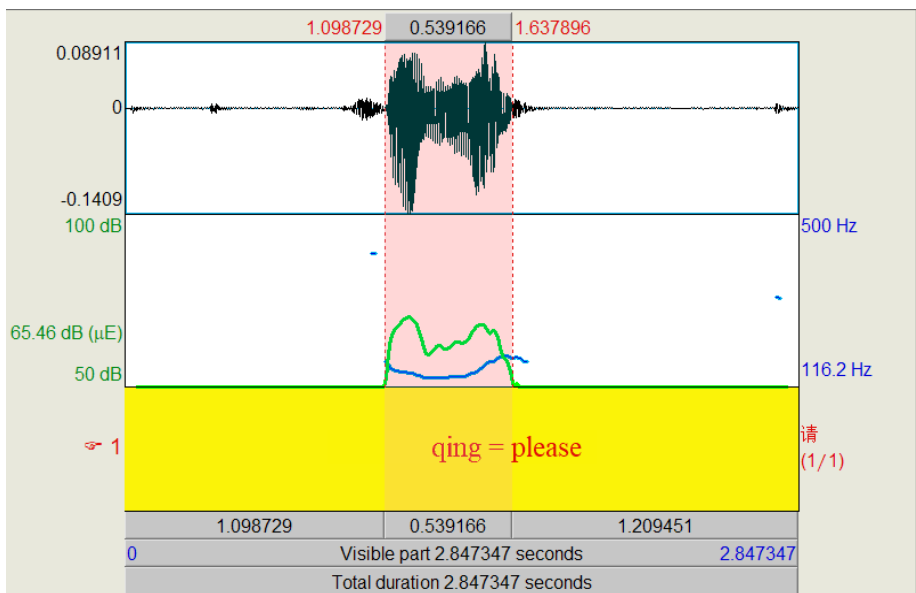


Figure 5. Phonological transcription of "qǐng"

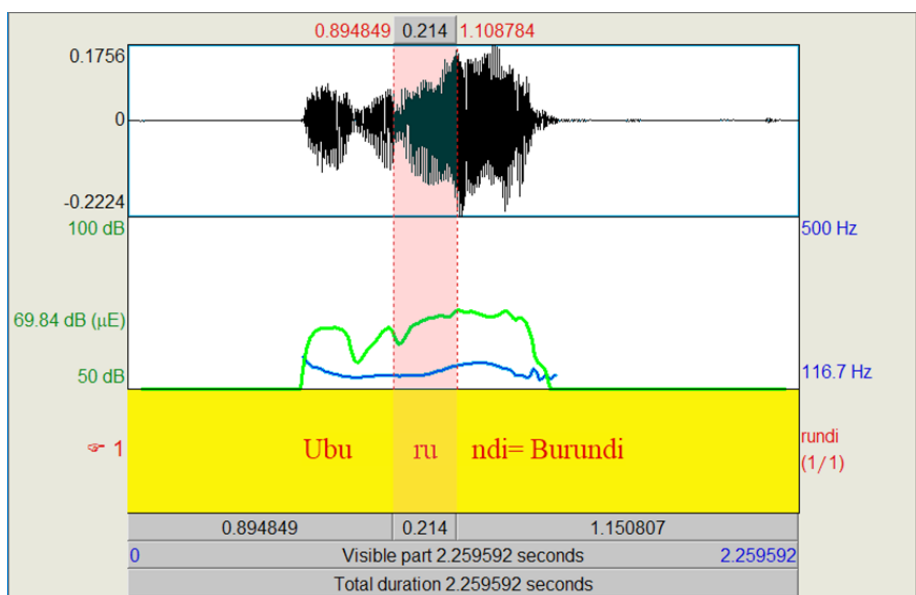


Figure 6. Phonological transcription of "Uburuúndi"

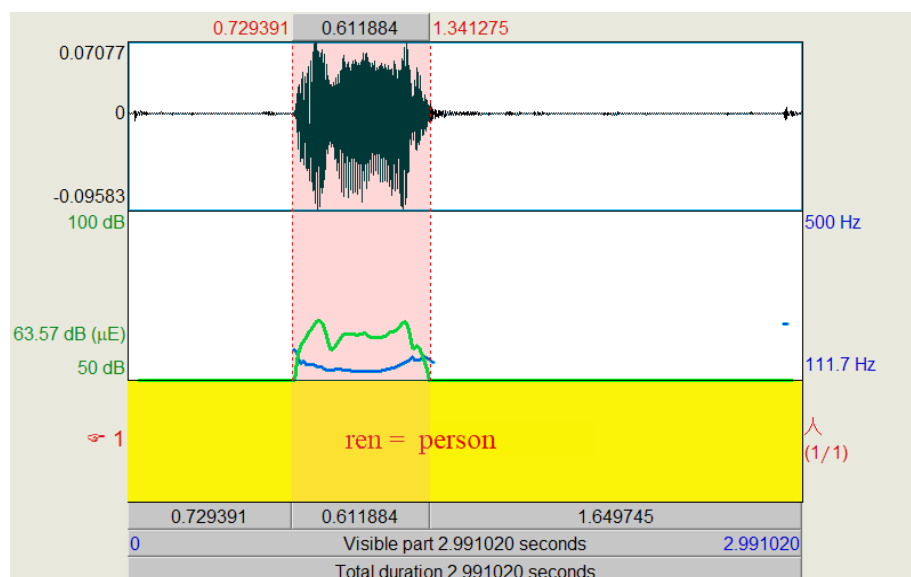


Figure 7. Phonological transcription of “Uburuúndi”

According to the information on Kirundi and Chinese tones demonstrated above, combined with the sound visualization on the Praat transcription, we can realize that Chinese T4 is produced as Kirundi H Tone, even though their descriptions in terms of tone value, tone pattern and tone marks are different. Chinese T4 is a falling tone while in Kirundi it is a high tone. If we analyze well the Praat sound transcription, we will realize that the Chinese T1 almost sounds like Kirundi modulated LH (áá). Likewise, Chinese T3 sounds like Kirundi modulated LH (aá). I inform the reader that on that table above which shows the inventory of Kirundi tones, I have adopted the tonal notation proposed by Meeussen (1959), there is another notation proposed by Ntahokaja (1960) which symbolizes this tone like Chinese T3. Finally, Chinese T2, although its notation is like the Kirundi H tone, has nonequivalent in Kirundi tonal production.

From this analysis above, we can explain why Chinese tonal production made by my participants does not fit with the universal TMS:

T4 is easy to produce for Burundians because it is closer to the Kirundi H tone in its production, and the second is the T3 because it is near to the Kirundi modulated LH tone. The third is T1 whose production is near to Kirundi modulated Tone HH, which is put on some limited Kirundi words. The last one is T2 whose production has nonequivalent in Kirundi, and this situation makes it too difficult for Burundian learners of Mandarin. In addition, Tone sandhi, in which a third tone (falling-rising) followed by another third tone becomes a rising tone, come to complicate Burundian learners of Chinese tones, as in Kirundi language, this phenomenon does not exist.

Although there are little similarities on the tone productions, there are also some restrictions on the tonal distribution in Kirundi and in Chinese:

A Chinese word can have a T4 at the initial position of word; e.g.: èr 二 “two”. However, in Kirundi, a syllable of type *vowel* in initial position of word or sequence of words does not have the H tone. Logically, where the H tone is grammatically intended for the first syllable of the initial vowel word, this tone moves (and is realized) on the second syllable. The position has been described as “extra tonal” (Goldsmith & Sabimana, 1986) in Kirundi. E.g.: “Kubárira” = to tell, morphologically, /ku-bár-ir-a/, the H tone is on the vowel of the theme of the verb, however, if we derive a noun from the verb, “intábarírwa” = a person who does not accept advice from others. So, according to the extra tonal mentioned above, the H tone which was on the vowel “a” of the theme of the verb, has changed the place to the following vowel of the syllable, and this was due to the presence of the H tone on the syllable which preceded the theme of the verb.

The same constraint excludes the H tone in initial position if the syllable consists of only one nucleus, and it prevents the realization of modulated tones in this position. Nor is there, in Kirundi, (and none of the previous work reports this case) forms that carry modulated tones on the last syllable of the isolated word.

According to Meeussen’s law, the two-tone succession is not tolerated and a more carrying a H tone is always preceded by a more carrying a M tone; a high tone causes the elevation of the previous tone, whether they are two long vowels of the same syllable or two long vowels in adjacent syllables.

In Chinese language, in polysyllabic word, each vowel carries a tone. Except some limited cases of neutral tone which is not a concern in this study. This situation complicates a Burundian learner of Mandarin tone, as he is accustomed to Kirundi which can carry no tone even in case of a polysyllabic word, e.g.: in Chinese: “gōnggòngqìchē” = Public bus; in Kirundi: “Impamyabushobozi” = a diploma

In conclusion, although it is proved that native tonal experiences facilitate L2 tonal acquisition; learners may assimilate the L2 tones to their native tonal categories which interfere with their acquisition of accurate L2 tones (So 2005&2010, Wang 1999).

Conclusion

In conclusion, despite the limitations present in this study, the results of this study add valuable material to the body of knowledge that already exists in this field. The experiment and analysis reported in this paper addressed the question in the introduction. Do the prosodic structures of Kirundi language affect the SLA of Mandarin tones? Results discussed above have shown that Kirundi tonal experiences do not facilitate Chinese tonal acquisition. The fact that Kirundi is a tonal language does not mean that Burundians acquire Chinese tones more swiftly or easily than those with a native non-tonal language. However, Hao (2012) highlighted that L2 learners with a native tonal language perform no better than those with a native non-tonal language. Just as the transition from non-tonal to tonal language is not easy task. Likewise, the transition from one tonal language to another is quite challenging. It is not easy for Burundian learners of Mandarin to produce Mandarin tones accurately because the tone categories of Kirundi will hinder them in acquiring Mandarin tone categories. In either circumstance, it is hard for these learners to reach the proficiency with tone categories similar to a native speaker's. Although it is believed that Chinese tones are difficult to learn, however, if they are started at early age, and with constant practice learners can attain higher level of proficiency. Again, a local Mandarin teacher will help the students in bridging this gap.

References

- Akinlabi, A. and Mark L. (2000). The tonal phonology of Yoruba clitics. In *B. Gerlach and J. Grijzenhoul, eds., Clitics in phonology, morphology and syntax* Pp. 31-62. Amsterdam: John Benjamins
- Bluhme, H and R. Burr (1971). An audio-visual display of pitch for teaching Chinese tone, *Studies in Linguistics* 22:51-57.
- Chen, Q.-H. (1997). Toward a sequential approach for tonal error analysis. *Journal of the Chinese Language Teachers' Association* 32 (1): 21–39.
- Duanmu, S. (2006). Phonology of Chinese (Mandarin). In *The Encyclopedia of Language and Linguistics* (2nd ed.). (Vol.5, pp. 351-355). New York, NY: Elsevier.
- Elliot, C.E. (1991). The relationship between the perception and production of Mandarin tones: An exploratory study. University of Hawai'i Working Papers in ESL 10 (2): 177–204.
- Goldsmith, J.A & S. Sabimana (1986). The Kirundi verb. Ms., Indiana University, 1986- hum.uchicago.edu.
- Gottfried, T. L., & Suiter, T. L. (1997). Effect of linguistic experience on the identification of Mandarin Chinese vowels and tones. *Journal of Phonetics* 25: 207-231.
- Hao, Y.C. (2012). Second language acquisition of Mandarin Chinese tones by tonal and non-tonal language speakers. *Journal of Phonetics* 40 (2): 269–279. He Ping. 2006. Chinese phonetics Course. Beijing: Peking University Press.
- Hyman, L.M. (2001/2000). Privative tone in Bantu. In *Shigeki Kaji (ed.), Cross-linguistic Studies of Tonal Phenomena: Tonogenesis, Japanese Accentology, and Other Topics*, pp. 237-257. Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.
- Hyman, L. M. & VanBik, K. (2004). Directional Rule Application and Output Problems in Hakha Lai Tone. *Language and Linguistics* 5.4:821-861, 2004.
- Ioup, G. and A. Tansomboon (1987). The acquisition of tone: a maturational perspective, in *G. Ioup and S. H. Wienberg (eds.), Interlanguage phonology*, Pp. 333-349. Rowley MA: Newbury House
- Kiriloff, C. (1969). On the auditory perception of tones in Mandarin. *Phonetica* 20: 63–64.
- Leather, J. (1990). Perceptual and productive learning of Chinese lexical tone by Dutch and English speakers. In *New sounds 90: Proceedings of the 1990 Amsterdam symposium on the acquisition of second language speech*, ed. J. Leather, and A. James, 72–97. Amsterdam: University of Amsterdam.
- Li, C. and Thompson, S (1977). The acquisition of tone in Mandarin-speaking children. *Journal of Child Language* 4: 185-99
- Na, L. (2010). The Chinese Language and Language Planning in China. *Washington DC: Heritage Briefs Collection, Center for Applied Linguistics*.
- Ndayishinguje, P. (1978). Contribution à la phonétique et à la phonologie du kirundi (avec application à l'orthographe). Université de Paris III, Thèse de doctorat.
- Ntahokaja, J. B. (1994). Grammaire structurale du Kirundi. Université du Burundi – A.C.C.T., Bujumbura
- Orie, O. (1997) Benue-Congo Prosodic Phonology and Morphology in *Optimality Theory*. Muchen: Lincom Europa.
- Shen, X.-N.S. (1989). Toward a register approach in teaching Mandarin tones. *Journal of the Chinese Language Teachers' Association* 24 (3): 27–47.
- Sun, S.H. (1997). The development of a lexical tone

phonology in American adult learners of standard Mandarin Chinese. Honolulu: University of Hawai'i Press.

21. Wan Y. & Li X. X. (2013). *Building Chinese Language through Listening and Speaking*, Central China Normal University Press.

22. Yip, M. (2002). *Tone*. Cambridge: Cambridge University Press.

Appendices

1. Experiment words

Pinyin with tone marks	Chinese characters	English translation
1.Xué	学	to study
2.Shān	山	a mountain
3.Cuò	错	error
4.Tóu	头	head
5.Hǎo	好	good
6.Fēn	分	minute
7.Bù	不	no; not
8.Nǚ	女	female
9.Wài	外	outer, outside
10.Chū	出	to be out
11.Dà	大	big
12.Qǐng	请	please
13.Rén	人	people, person
14.Hěn	很	very
15.Nán	男	male
16.Duìmiàn	对面	opposite, in front of
17. Yīngwén	英文	English language
18. Lùrén	路人	passerby
19. Duōdà	多大	how old
20. Xǐ zǎo	洗澡	to have a bath
21. Guò lái	过来	come over; come up
22. Hén hǎo	很好	very good
23. Běifāng	北方	northern
24. Búcuò	不错	not bad; pretty good
25. Tiào wǔ	跳舞	to dance
26. Guó jiā	国家	country; nation
27. Chūqù	出去	go out; get out
28. Bīngxiāng	冰箱	refrigerator
29. Xuéxiào	学校	school
30.Chángcháng	常常	often; usually

2. Judging form

Listen to the audio and judge whether the tone production is correct or incorrect. If it is correct, let the blank empty. For the incorrect productions, put the tone the actual sound produced by participants sounded like.

Participants Words	A		B		C		D		E		F	
1. 学												
2. 山												
3. 错												
4. 头												
5. 好												
6. 分												
7. 不												
8. 女												
9. 外												
10. 出												
11. 大												
12. 请												
13. 人												
14. 很												
15. 男												
16. 对面												
17. 英文												
18. 路人												
19. 多大												
20. 洗澡												
21. 过来												
22. 很好												
23. 北方												
24. 不错												
25. 跳舞												
26. 国家												
27. 出去												
28. 冰箱												
29. 学校												
30. 常常												