An Exploration of Using Rhythm to Make Chinese Learnable:
An Action Research Project in
Western Sydney Primary Schools

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Declaration

I declare that except where due acknowledgement has been made, this research proposal is my own work and has not been submitted in any form for another degree at any university or other institute of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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Abstract

This research focuses on the exploration of a rhythm-based language teaching approach to make Chinese (Mandarin) learnable. A qualitative action research was designed to improve the research consistent with the teacher-researcher’s teaching practice in Tianyuan Primary School. The aim of this research was to find a suitable rhythm-based teaching approach to make Chinese learnable to non-Chinese background language learners. Based on the data analysis and a review of the literature, this action research found that students are more engaged in the Mandarin lessons affectively, operatively and cognitively, with the employment of speech rhythm and music rhythm. Moreover, rhythm plays an important role in three stages: before-class, class-processing and post-class. Last but not least, this research scaffolded practical ways of rhythm-based teaching to increase Chinese learnability for students.
Chapter 1 Introduction

This research explores the employment of rhythm in teaching Mandarin, aiming to make Chinese learnable as a foreign language for Australian school students, and especially focusing on Western Sydney primary school-aged students. This introduction consists of six sub-topics: background, questions of research, significance, aims, outcomes and outline of the thesis.

1.1 Background

1.1.1 Personal background

The research topic arises from the author’s personal experience. Since she was a little girl, the author has enjoyed reading traditional Chinese poems and singing nursery songs, which are metrical and rhythmic. Although sometimes unable to catch the inherent meaning immediately, it was easy for her to memorize lyrics with the help of rhythm characteristics and prosodic features. She learned to play the cucurbit flute (hú lú sī), a traditional Chinese instrument which can be played rhythmically. Gradually, she also became interested in the art of recitation, because it is cadenced and rich in feeling. She has found that famous speakers, like Winston Churchill and John Kennedy, were experts in rhythm rhetoric. Churchill’s delivery of a declaration of Britain’s policies regarding World War II, and Kennedy’s Inaugural Address were both powerful and inspiring. After careful study of such speeches and recitations, the author developed a strong awareness of rhythm’s great impact on language. Fortunately, she was given the opportunity for further exploration.

The author was selected by the cooperative program organized by Ningbo bureau and the state of NSW. This program, Research Oriented School Engaged Teacher-researcher Education (ROSETE), gave her a chance to teach Chinese as a second language in Western Sydney schools. The author was eager to take full advantage of this opportunity and work on a rhythm method to increase Chinese learnablity.

1.1.2 Australian context

According to the Australian government (2010, p. 8), Australia’s success will be based on choice, not chance. The choice is to broaden and deepen all aspects of its relationships with Asia, including Asian cultures and languages; only in this way can Australia be a land of
increased opportunity, prosperity and fairness. Asia’s rise, especially that of China and India, is changing the world scene (p. 7) and altering the established strategic order (p. 13). All Australian students will have the opportunity, and be encouraged, to undertake a continuous course of study in an Asian language throughout their years of schooling (p. 22). Obviously, the Australian government is working on building the demand for Asia literacy in Australian schools, defined as knowledge, skills and understanding concerning the histories, geographies, literatures and languages of the diverse countries of the Asian region (Asia Education Foundation, 2012, p. 3).

China, as the largest developing country in the world, has unlimited and unpredictable potentialities. Since the reform and opening up of 1978, China has attracted worldwide attention: the country joined WTO in 2001, held a successful Olympic Games in 2008, and organized the twenty-second APEC meeting in 2014, among other achievements. China never fails to surprise the world, and spares no effort to spread its culture and languages. The establishment of a number of Confucius Institutes overseas is a good example of this.

It seems that the language policies of China and Australia match each other very well. However, the status quo is not as ideal as could be expected. Figures from the end of 2007 show that fewer than twenty per cent of Australians working in China can speak the language at all, and only ten per cent have studied a China-related subject (Orton, 2008). There are new online syllabus documents that have been developed in Chinese for primary and middle schools in several states in Australia, but a shortage of qualified language teachers has been the biggest barrier to further implementation of the NALSAS (National Asian Languages and Studies in Australian Schools) program launched in 1994 (Asia Education Foundation, 2012, p. 4). The Australian Professional Standards of Teachers, which was published by the Australian Institute for Teaching and School Leadership (AITSL) in 2015, provides guidelines for moving from under-graduate status to graduating, and being proficient, highly accomplished and a leader. The AITSL Standards does not mention bilingual fluency.

1.2 Research Questions
The main research question of this study is:
How can a rhythm-based teaching approach be developed to make Chinese learnable for students in Western Sydney primary schools?
The contributory research questions are:
1. How are students engaged in learning Chinese with the help of rhythm?
2. What roles can rhythm play in increasing learnability of Chinese for students?
3. How does a teacher scaffold a rhythm-based teaching approach in practical ways to make Chinese learnable?

1.3 Significance of the Study

1.3.1 Political significance
The Australian government regards the twenty-first century as the Asian century and focuses on broadening all aspects of its relationships with Asia. The ROSETE program fulfills an important role in facilitating the teaching of Asian languages and has already been in operation for eight years. The Australian government acknowledges this trend, since more and more Australian students are being given the chance and encouraged to engage in learning the Chinese language.

This study meets the requirements of leading in Asian literacy, accelerates the creation of person to person links as advocated by the Australian government, and creates more possibilities for pursuing the cooperative path to a joint prosperous future. Through closer understanding, the countries of the Asian and Pacific area can rely on, trust, and help each other, leading, hopefully, to a more peaceful and harmonious world.

1.3.2 Cultural significance
Language is not only a communication tool, but also a carrier of culture. Teaching Chinese as a second language to non-Chinese background students acknowledges and reinforces cultural diversity. Teachers involved in the ROSETE program, consciously or not, constantly create opportunities for cultural engagement through their appropriate use of language, or through the direct display of culture-related teaching content. No doubt modern Australian values may sometimes conflict with prevalent Chinese values, but resistance to novelty can possibly be overcome through attitudes of openness and modesty.

Given the chance to attend classes delivered by native Chinese speakers, which local students can take full advantage of, they can by degrees develop a clear notion of what current China looks like, how contemporary Chinese behave, why the Asian literacy policy is popular, and
so on. This generation of students will then become the pillars of the country, the backbone of society. Hopefully, what they will have achieved at that time will be exactly what the government and general society expect now.

1.3.3 Educational significance
The educational significance of the study is threefold: significance for schools and students engaged in the ROSETE program; significance for language teaching in Australia; and significance for the education field.

The exploration of rhythm-based teaching to make Chinese more easily learnable greatly benefits schools and students engaged in the ROSETE program. It is before adolescence that students have most capacity for the acquisition of a target language. During this crucial period, students are sensitive to the coordination of listening and action; rhythm teaching therefore suits them very well. A positive study atmosphere will be created and a high class attendance rate will be achieved in local primary schools.

Furthermore, this research complies with the wider agenda of Asian language teaching put forward by the Australian government. ROSETE teachers can diversify teaching methods to meet the specific needs of students across the full range of abilities. Rhythm teaching based on action research will result in a better impact of language teaching in Australia. The barrier of a lack of proficient teachers may be overcome.

This study has been carried out by the researcher in her everyday work setting for the primary purpose of improving the professional practice of teaching language through rhythm. The collection, analysis and interpretation of data are likely to expand and slightly revise the theoretical framework of rhythm teaching, bringing a more complete conceptual system of second language teaching to the education field.

1.4 Research Aims
This research aims to find an effective and efficient way to teach Chinese to second language learners. The rhythm-oriented teaching approach comprises a wide range of knowledge, theories and strategies, but only the most suitable parts will be selected, according to the local students’ responses, and will be flexibly developed on the basis of Australian and Chinese characteristics.
1.5 Research Outcomes

The predicted and expected research outcomes are as follows:

1. Stimulating students’ interest in Chinese, inspiring their curiosity for further study of rhythm, and enhancing their ability to continue learning Chinese;

2. Practicing existing rhythm teaching theories, contributing to Chinese rhythm teaching as a second language strategy, creating and developing rhythm strategies appropriate to non-Chinese background students;

3. Improving the author’s capability as a Chinese language teacher-researcher, and enhancing the author’s comprehension of action research;

4. Accelerating the growth of educational cooperation between China and Australia.

1.6 Outline of the Thesis

The thesis is composed of seven chapters. Chapter 1 presents the background and purpose of the research. The significance of this study is explained and research questions are defined. Chapter 2 reviews and summarizes the rhythm-based language teaching approach and the possibilities and applications of this approach in second/foreign language learning. Chapter 3 outlines the methodology used in this thesis, and shows how this qualitative action research was carried out, including the research design and data collection methods (observational notes, self-reflective journals, students’ work samples and interviews). Ethical issues are also discussed in this section. Chapters 4 to 6 concentrate on data analysis and discussion. The focus of and arguments for rhythm-based teaching are presented thoroughly. Each chapter is associated with one contributory research question. Chapter 7 brings together all the findings of the thesis, and puts forward its key contributions and limitations; it offers suggestions for improvements and possible further studies. In essence, it presents the effect and capability of a rhythm-based language teaching approach in making Chinese more easily learnable.
Chapter 2 Literature Review

To begin the research process, the author first read relevant authoritative scholars’ works in this field and summarized their main perspectives and study orientations to obtain a clear idea of what in this field scholars are paying attention to. This has helped the author to conduct her own research based on these findings.

2.1 Definitions and Typologies of Rhythm

2.1.1 Definition of rhythm

Rhythm, according to Oxford English Dictionary (2016), is a strong, regular, repeated pattern of movement or sound. The word originated from French *rithme*, Latin *rhythmus* and Greek *rhythmos* in the mid-sixteenth century.

Rhythm is a mysterious force everywhere in life, moving all creation (Regner, 1977) – for example, the soft and steady rhythm of a heartbeat, the throbbing of a pulse, or the recitation of a favorite poem. As Lahoz (2012, p. 130) indicated, “[r]hythm is a speech property related to the temporal organization of sounds in terms of grouping”. People chant, sing, listen, play, read and write their way to a thorough knowledge of rhythm, from the basic pulse, accents, meter and syncopation to the multilayered complexity of polyrhythm.

This study will focus on music rhythm and speech rhythm in Chinese language teaching. The former highlights the systematic arrangement of musical sounds, principally resulting from duration and periodical stress, while the later underlines the measured flow of words and phrases in verse or prose, as determined by the relation of long and short or stressed and unstressed syllables.

With surprising frequency, rhythm emerges in the things that children do; whether clapping, snapping, slapping, tapping and stamping or with the help of instruments, rhythm activities are always a fascinating and naturally attractive experience for them. Children develop rhythmic perception as well as understanding quite early, and achieve greater rhythmic facility easily while singing or engaged in rhythmic language and movement. Their natural affinity for the concepts of rhythm is more fully realized through training by sensitive teachers or parents (Campbell and Scott-Kassner, 1995), through learning to use the regular
pulses and patterns of spoken language, through the revelation of the rhythmic power in proverbs, rhymes, prose and poetry, and through expressing the accents, flow and shading of language in a way parallel to music.

2.1.2 Typology of rhythm

Pike (1945, as cited in Lahoz, 2012) contributed rhythm typology and coined the terms “stress-timed language” and “syllable-timed language”. Stress-timed languages attempt to balance stressed syllables at comparatively regular intervals. English, German, Dutch, Swedish, Arabic and Greek belong to this rhythm class. In an utterance in syllable-timed language, a similar period of time is devoted to pronouncing each syllable. This rhythm class includes Spanish, Italian, Portuguese, French, Korean and Mandarin.

Due to the target language and target students, great attention will be paid in this paper to the differences between English as stress-timed and Mandarin as syllable-timed, through comparison of words in English and their counterparts in Mandarin.

2.2 Music Rhythm

2.2.1 Relationship with linguistics

Music has frequently been applied in modern teaching. Wen (2014) reported that contemporary college physical education teachers make good use of music. When rank and formation drills are combined with music, students become interested in what they may otherwise have thought was boring and dull. It is of great significance that the music chosen should appeal to the age as well as the specific characteristics of target students, be in line with the teaching content and have strong educational and aesthetic properties.

Being prosodic and metrical, music is an especially effective instructional material for rhythm teaching. Music is generally said to be a universal language as old as the human species. It is a communicative activity which conveys musicians’ concepts of moods, emotions, thoughts and impressions to listeners (Abubakre, 2011). No matter how differently music may be defined according to various criteria, it is significant that “all definitions show that there exists a symbiotic relationship between music and language” (p. 61).

For over two decades neuroscientists have spared no effort to comprehend how the brain processes music and how music produces positive, measurable and enduring changes in brain
development. They have concluded that music is closely connected with language, both sharing the same auditory, perceptive and cognitive mechanisms that impose structure on auditory information received by the senses (Ayotte, 2004, as cited in Li and Brand, 2009). Music helps the cognitive process as it engages the two lobes of the brain, both of which also co-ordinate and process language (Zatorie, 2008, as cited in Igbokwe and Ugwu, 2011). The research results of Daniele et al. (2010) coincided with those of previous studies. They conducted two functional magnetic resonance imaging (FMRI) experiments to investigate the domain specificity of linguistic and musical processing. Participants listened to pairs of spoken words, vocalized and sung words in the experiments. Results of both experiments were consistent in confirming that both hemispheres are involved in speech and music processing, though to a different degree. Left temporal and frontal brain regions are more involved in linguistic processing, while right temporal and frontal structures are more involved in music processing. In 2010, Bidelman, Gandour and Krishman also explored cross-domain effects in the music and language experience of the representation of pitch in the human auditory brainstem. They aimed to determine “whether language and music are processed by distinct and separate neural substrates or, alternatively, whether these two domains recruit similar and perhaps overlapping neural resources” (2010, p. 425). The data were recorded and collected from the brainstem in native Chinese, English amateur musicians and English non-musicians. Chinese and musicians, relative to non-musicians, achieved higher pitch-tracking accuracy across domains and more robust pitch strength, regardless of domain. This experiment showed that pitch encoding is stronger in those who are trained musically or are familiar with the use of pitch in tonal languages, since pitch experience in either music or language can transfer from one domain to the other. More recently, Liu (2015), as an erhu soloist and musicologist, stated that music shares similar cerebral networks and working processes with language. For either songs or language, learners first take sound perception, brain specificity, and phonological processing step by step. In other words, Mandarin learners listen to the sounds, receive messages and imitate the sounds. Neuroscientists also noticed identifiable differences between participants classified as musicians and non-musicians. They found that a musician’s brain is able to work twice as well as a non-musician’s and twice as fast in general. In a majority of studies, musicians are defined as people who have received formal music training, such as learning to play a musical instrument. Nevertheless, Collins (2014) ventured that “learning of a musical instrument is not the only form of music education, but it provides clear and easy parameters
on which to base a scientific study” (p. 8). It is generally agreed that the earlier children are exposed to music the more they benefit.

### 2.2.2 Educational functions

A range of research has shown the importance and benefits of using music in language teaching, including improvements in both long-term and short-term memory, language acquisition and syntax, executive function, emotional well-being and brain plasticity (Collins, 2014).

Music is associated with affective learning, which stimulates students’ interest and enables them to be engaged while learning a language. When students’ affective filter is low, they feel comfortable and motivated toward studying (Lin, 2013). Modern students react when they are exposed to music, even if they are not familiar with the lyrics in the songs; they feel relaxed, stress free and in an enjoyable state of mind once caught up in the rhythm and melody. Becerra (Becerra and Muñoz, 2013), being a primary school English teacher herself, believed authentic songs, adapted songs, action songs, chants, nursery rhymes and anthems can promote children’s happiness and well-being. Specifically, she chose a traditional song, *Old MacDonald*, which introduces animals on MacDonald’s farm, along with their corresponding sounds. Students became interested in the animal flashcards presented in front of them when they were surrounded with sounds of the song. Becerra focused on the intonation patterns and song rhythms, and then asked students to imitate an animal’s sound when its name was called out. Thus, the children improved their language and musical intelligence in an enjoyable way.

Music advances students’ listening and speaking skills, enlarges vocabulary of foreign languages, and expands sentence structures and patterns (Millington, 2011). Li and Brand (2009) explored the effect of music on vocabulary acquisition and language usage and the understanding of meaning in English teaching for mainland Chinese students. The results showed that the classrooms with intensive music teaching embedded achieved better scores in English than those with only intermittent music teaching. Segal (2014) observed that rap style music is helpful in teaching vocabulary, grammar, discourse and prosody.

Music reflects cultural diversity. Music gives entry through one portal to the culture, develops new cultural perspectives, and cultivates new insights into the country of the target language (Han and Campbell, 1992). As early as the 1990s, four songs with strong Chinese melodic
features were chosen to illustrate the possibilities of western classroom adaptation. As a sort of ambassador of a culture, song lyrics are infused with values, symbols and beliefs, thus offering students opportunities to grasp the nature and style of a particular culture (Li and Brand, 2009).

Music has the potential to support verbal memory. It is believed that the left brain hemisphere of the majority of people has dominance for linguistic functions, while music function is generally positioned in the right brain (Bidelman, Gandour and Krishman, 2010). Memory experience in either music or language can transfer from one domain to the other. Music rehearsal, such as through pictures and narrative, is used unconsciously to enhance memory storage and retrieval pathways in the brain. Enhanced verbal memory is linked to conceptual tag, emotional tag and contextual tag, and suggests that the brain translates these skills into language (Collins, 2014). A key study conducted by Ludke (Ludke, Ferreira & Overy, 2013) suggested that the efficacy of singing in a foreign language was greater than speaking when the subjects were required to recall and reproduce a list of short paired-associate foreign language phrases.

Hijazi and Al-natour (2012) added that using music in teaching English poetry has great impact. To measure the effect of this pedagogical tool, an experiment was conducted in adult EFL classrooms of one Jordanian university. The sample of the study consisted of 120 students (56 male and 64 female) from the third year, who were distributed into two groups. The experimental group (30 male and 26 female) was taught poetry accompanied with music for eight weeks, while the control group (31 male and 33 female) was taught poetry in the traditional way (no accompany of music) during the same time period. To be fair and to achieve the aim of the study, a pre-test and post-test were also carried out to survey the two groups’ learning levels. The findings of the post-test presented statistically significant differences between the groups. “Poetry’s attraction is in its conciseness, its brevity, and its power to convey so much in a limited space” (Hijazi and Al-natour, 2012, p. 295). “When a poem is accompanied with music, it helps students to stir up a sensorial response by making them gain a better understanding of the meaning of the poem” (p. 296).

2.2.3 Teaching strategies
Music teaching does have limitations and difficulties. There are an increasing number of modern language teachers who have keen awareness of employing music as a pedagogic
method, but who are restricted by limited time, an unsupportive teaching environment, their students’ age group, or a shortage of resources. They may also lack confidence if they lack musical training (Lin, 2013). Teachers are often too worried to take a selection of songs into serious account, since they need to consider whether the songs chosen are suitable for the students’ capabilities, whether the lyrics are related to the teaching topics, and whether the songs can be developed into language learning tasks.

In order to solve these problems, valuable suggestions have been put forward in various studies. Millington’s study (2011) recommended that teachers maximize the potential of songs, prepare well, and carry out well designed core activities together with follow-up work. To illustrate, *The Wheels on the Bus*, a popular children’s song, was used as an example. This particular song might be suitable for language learning purposes on account of having a repetitive rhythm with a recurring beat that is similar to the stress patterns of spoken English. There are 11 monosyllabic words and lyrics comprising a simple vocabulary. It is useful to list and form basic sentence structures in the preparation stage – such as, “Who is he? What does the bus driver do? What do the wheels do?” (p. 138) – and then involve students in singing the song or even dancing to the music several times in the core stages. The follow-up stage should be built on the successful completion of the previous stages. Students could be encouraged to use phrases of the song in role-play, fill a gap with the correct word, and other written or oral activities. Another solution arising from Lin’s practical study (2013) was to teach language through rap music. It is believed that language content should be introduced in natural and authentic ways, rather than through exercises with contrived and artificial content. The rap curriculum is more accessible to both teachers and students since it is normally spoken rather than sung. As a teacher of English to students of other languages (TESOL), Lin demonstrated how teachers could easily take advantage of rap materials and resources. She worked together with her son on writing a script, recorded her son’s creative provocative beat and brought it to school into a grammar class. To her surprise, students from other classrooms even came in to listen to the grammar rap during lunch break. It was the first time she had seen students asking for extra grammar lessons during their free time.

“The purpose of research should always be to inform and improve practice” (Collins, 2014, p. 9). The findings from previous studies could be applied in a wide range of circumstances, especially supporting the establishment, continuation, extension and active justification of music education through the school curriculum. The author will continue to do this in her
Mandarin classes. In addition, she will take advantage of traditional Chinese instruments as practical teaching tools. The two-string fiddle (erhu), bamboo flute (dí), four-string flute (sōn xián), seven-string zither (qín) and popular sixteen-string zither (zhēng) will be introduced to students, and the cucurbit flute (hú lú sī) will be played in class. After all, the traditional Chinese character for music is 乐, which is nearly the same as the character for medicine, 药.

Music is a kind of medicine, bringing power and inspiration to language learning.

2.3 Speech Rhythm

2.3.1 Definitions of speech rhythm and rhythm teaching

“Rhythm derives from the repetition of elements perceived as similar. In speech, these elements are syllables, or stressed syllables in particular” (White and Mattys, 2007, p. 501). Speech rhythm is an ordered recurrent alternation of strong and weak elements in the flow of sound and silence in speech (Gibbon, 2005). One particular form of rhythm is iambic rhythm, or trochaic rhythm. Shakespeare’s sonnets are the most outstanding and well-known representative of this type of speech rhythm. In the understanding of a language by its native speakers, mastery of prosodic features, such as rhythm, stress and intonation outweighs the importance of individual sounds or syllables.

Rhythm teaching is a subject of the arts. Subtle changes in the tone, voice and speed of language will have a direct impact on teaching. According to Wang (2011), in order to achieve better teaching effects and learning responses, three main factors should be taken into account. First, “从内容的疏密相间上讲究韵律” (2011, p. 196), which refers to paying attention to the rhythm according to the density of the content. Second, “从教法的顿挫及间隔变换中讲究韵律” (p. 196), which stands for focusing on the rhythmic pauses and changes in the delivery of speech. Third, “从教学语言的轻重缓急中讲究韵律” (p. 196), which signifies increasing the use of the rhythm of the emphases and speed of the language in teaching.

Speech rhythm has an underlying foundational importance in early language acquisition. The phonological developmental trajectory of bilingual children is distinguished from that of
monolingual children, whose second language learning manifests acquisition delay and is influenced by first language dominance (Mok, 2013). Mok (2013) examined the speech rhythm of monolingual and bilingual children from birth to age three. Monolingual children show distinct rhythmic patterns during the process of acquiring rhythmically diverse languages, for example, English (stress-timed) and Cantonese (syllable-timed), while bilingual children display very similar patterns when acquiring these two languages. The results from expanding the study (Mok, 2013) to children aged two to six coincided with the previous findings. It compared five children bilingual in Cantonese and English with five children monolingual in each language, from whom qualitative data on rhythmic metrics, syllable structure complexity and lexical stress were collected.

2.3.2 Speech rhythm in Chinese

It is widely acknowledged that education in any type of language, without exception, is bound up with the features of the language itself and reveals its particular nature. For oral Chinese (Mandarin), the most obvious feature is rhythm, which runs through phonetics, grammar and pragmatics and directly influences and restricts the use of the language (Zhang, 1962, as cited in Xu, 2008). The rhythm consists of 音顿律,平仄律,声韵律,长短律,快慢律,重轻律,抑扬律 (pause, tone, intonation, duration, speech rate, stress and trochaic rhythm).

The pause is an important means to conveying implications and emotions. Different pauses, even in sentences of the same words, will result in differing connotations. For example, “我们这里有的/是大学生” denotes that some of us here are university students, while “我们这里有的/大学生” implies that we have plenty of university students here. The former sentence simply describes a fact; the later one highlights that university students are sufficient here and seems to express a sense of superiority or even contempt. Of course, the pause has other functions and even develops as a speech strategy, which will be further discussed in the following section.

The Chinese morpheme (or smallest meaningful unit) is the monosyllable, and the vowel of every monosyllable has a tone, which makes a difference in the word’s meaning. Chinese has four tones, 阴平, 阳平, 上声, 去声 (high and level tone, rising tone, falling-rising tone,
falling tone, or, briefly named, 第一声, 第二声, 第三声, 第四声 (first tone, second tone, third tone and fourth tone). To illustrate, when different tones are added to “xìe”, disparate characters and ideas are signified. With the first tone, “xìē” means “歇 [rest]”; with the second tone, “xìé”, it means “鞋 [shoe]”; with the third tone, “xìē”, signifies “写 [write]”; and with the fourth tone, “xìè”, means “谢 [thanks]”. Of course, it is very likely that the same tone of the same pinyin could produce several corresponding characters. To illustrate, “gē” can mean “哥 [brother]”, “歌 [song]”, “鸽 [pigeon]”, “割 [cut]” and so on.

Intonation strengthens the beauty and impression of the utterance. Take, as good examples, “迎来春色换人间” and “迎来春色换人间”. The effects are comparatively distinct though the two sentences only differ in their fourth word. When the word “天” is changed to “色”, the intonation of the whole sentence presents an ‘up-down-up’ pattern, and a picture of a fascinating spring scene is put into the auditor’s mind.

Duration, speech rate and stress, which may seem easy to handle, still need long-term repeated practice. After all, language sense is a kind of habit, to experience, to comprehend, to accumulate, to put to use step by step. The most valid way of becoming proficient, even for native Chinese speakers, is to read out rhythmic material loudly and emotionally. Xu (2008) recommended that modern Chinese language education should integrate these great features of Chinese.

Trochaic rhythm in Chinese results from changes in intonation, while in English results from a stressed syllable being followed by an unstressed one. Although the Chinese differs from the English version, trochaic rhythm frequently appears in Chinese poetry as well, the effect being achieved by the alternation of 平 (first tone and second tone) and 仄 (third tone and fourth tone). To illustrate, the corresponding trochaic rhythm of “锄禾日当午，汗滴禾下土。谁知盘中餐，粒粒皆辛苦 [Farmers weeding at noon, sweat down the field soon. Who knows food on a tray, thanks to their toiling day?]” is “平平仄平仄，仄平平仄仄。平平
2.4 Previous Rhythm-based Studies on Second/Foreign Languages
A number of studies have evaluated rhythm in second/foreign language learning. “Rhythm, and its related features of vowel duration and accenting, has long been identified as one of the main contributors to the intelligibility of non-native speakers” (Reed, 2012, p. 73). Cross-linguistic rhythmic differences pose problems for second language acquisition, “given the intricate combination of acoustic cues, the perceptual difficulties caused by phonological deafness, and the interferences with the organization of segmental contrasts and with lexical access” (Lahoz, 2012, p. 130).

2.4.1 English as a second/foreign language
English, as world lingua franca, is frequently analyzed in second/foreign language acquisition. Second/foreign language learners might prefer to focus on “a core of pronunciation features that are vital for international intelligibility, rather than aim for native-like pronunciation” (Jenkins, 2000, as cited in Reed, 2012, p. 68). Reed (2012) proposed that it is very necessary to include a conversation analysis perspective on phonetic and prosodic features in a teaching syllabus for English language pronunciation. Teachers are encouraged to figure out how speech rhythm can be employed successfully by language learners.

Igbokwe and Ugwu (2011) reported that Nigerian senior secondary school students’ poor performance at learning oral English has been attributed to ineffective teaching; they recommended a rhythm-involved teaching method to enable teachers to update their skills and knowledge. It is said that the difficulty of learning a second language arises from the differences between language systems. Nigerian students suffer from mother tongue interference as well as the phonological processes of assimilation and elision in English. Teachers play an important role in bringing learners into a completely new and strange English world, while still making them feel safe. Accordingly, 48 randomly selected English language teachers from Nsukka local government area were examined regarding the relevance of music and the steps to be employed for oral English language teaching. Most of them agreed that music offers an effective teaching technique and material to “expose students to the phonological aspects of language such as stress, rhythm, accent and intonation” (Igbokwe and Ugwu, 2011, p. 23).
More recently, Bailey (2015) proposed a Content and Language Integrated Learning (CLIL) strategy, concerning teaching various school subjects through a foreign or second language: “Ten minutes of English three times a day is much more effective than one hour two or three times a week” (p. 420). School teachers were thus encouraged to introduce English into easy and brief activities in all subjects – for example, they put up dynamic posters in the classroom. The teacher-researcher of this paper aims to cultivate children’s habit of learning Chinese by frequency and regularity of practice. Bailey’s (2015, p. 421) statement that “the most valid way is through rhythm”, highlights the importance of a rhythm-based language teaching approach once again.

2.4.2 Chinese as a second/foreign language

Less research has been done on syllable-timed languages (such as Chinese) as second/foreign languages than on stress-timed languages. Systemic and thorough studies are lacking on how each ingredient of metrics works during the process of second language acquisition. The following study is an exception.

Zhang and Tsurutani (2013) carried out a listening perceptual study of German students who were learning Mandarin as a second language, aiming to explore the impact of timing and pitch on naturalness of speech. Interestingly, their collection and analysis of data was based on how native Chinese speakers evaluated German students’ Chinese pronunciation. They indicated that native Indo-European language speakers’ strong foreign accent in Chinese pronunciation was not only a result of the difficulty of Chinese intonation, but more possibly stemmed from the uncalibrated rhythm. Rhythm is usually perceived as a whole; however, in order to examine the contribution of timing and pitch to the naturalness of speech, Zhang and Tsurutani designed a target listening experiment.

The resource for this experiment was chosen from the Free University of Berlin, at which a variety of Chinese intonation (e.g. modified tones of “一” and “不”) and complicated initial consonants (j, q, x, zh, ch, sh, z, c, s) were exhibited. The voices recorded were of those German students who had completed an 18 weeks’ Chinese language course. Before testing, three professional Chinese experts selected 20 sentences, each with five to nine syllables, and each representing a type of uncalibrated rhythm: correct timing and correct pitch; correct
timing and wrong pitch; wrong timing and correct pitch; wrong timing and wrong pitch. Fifty-two native Chinese speakers, aged from 18 to 57 years (26 male and 26 female), volunteered to mark the level of naturalness of every spoken sentence with a score of one to seven (seven being the highest score and one the lowest). Every volunteer heard each sentence only once, in random order, through the computer program, and scored it on the basis of his or her instinct. After statistical analysis, Zhang and Tsurutani found that those correct in both timing and pitch obtained the highest score for naturalness, while those wrong in both aspects achieved the lowest score. Unexpectedly, those wrong only in timing gained a higher subjective evaluation than those wrong only in pitch. Therefore, it is obvious that pitch and timing directly influence the perception of naturalness of speech and that the effect of pitch is stronger than that of timing.

That study, on the basis of its experiential conclusion, also inspired some educational strategies in teaching Chinese pronunciation to speakers of non-Chinese background. Traditional Chinese teachers are used to paying great attention to the phoneme, preferring to teach pronunciation starting from the basic units (consonant, vowel and tone) and then gradually progress to words, phrases and sentences. However, it may prove counterproductive if the four tones (high and level tone, rising tone, falling-rising tone, falling tone) are overemphasized, since the four tones are relatively changed and even weakened in particular situations. Moreover, overseas Chinese curricula are usually allotted short time periods and lack a proper language environment, and students’ enthusiasm for learning Chinese will generally be affected once too much stress is put on the building of a phonological basis. In contrast, flow of speech should be taught initially, focusing on naturalness of speech, highlighting communicative competence and rectifying phonemes through conversations. It is recommended that Chinese teachers make up simple poems and clap hands while reading them aloud, with the aim of letting students realize the subtle changes of Chinese rhythm and timing. Such training in Chinese rhythm has great practical significance and is helpful in stimulating students’ learning interest. The following is an example (Zhang, 2013, p. 171):

前天星期五，前天我跳舞。[The day before yesterday was Friday, I danced.]
昨天星期六，昨天我遛狗。[Yesterday was Saturday, I walked a dog.]
今天星期天，今天我吃面。[Today is Sunday, I eat noodle.]
Some Chinese researchers tried to fill the gap in this area of teaching and focused on second/foreign language learners’ strategies of pause and delay during the acquisition of Chinese. The pause appeared naturally to meet the need for physiological breath or fulfill the function of punctuation like the comma and full stop. Pause and delay strategy is the integrated process of duration, pitch and sound intensity. Zhang (2013) compared native English speakers (American and British speakers) with native Chinese speakers via the software PRAAT and Gold Wave Digital Audio Editor (5.0), aiming to explore the differences or similarities in time and frequency of the silent pause. Frequency of the silent pause refers to the number of times a stop exceeding 0.2 seconds occurs during the pronunciation period (Chen, 2013). There is usually one silent pause per 20 words in English, while a silent pause occurs once per two syllables in Chinese. Therefore, theoretically, it was expected that English speakers would lessen the occurrence of pause and delay in their acquisition of Chinese. Surprisingly, experimental results deviated from the prediction. English speakers preferred to employ pause and delay to find time for organizing words. And delay is used to achieve effects of stress. These findings are consistent with experimental results for Koreans (Chen, 2007, as cited in Chen, 2013). The development of American learners’ rhythmic features is imbalanced – pitch takes initial place, duration comes second, while they find pause and delay relatively difficult to handle.

The rhythmic inaccuracy of non-Chinese background students occurs not only in their acquisition of oral Chinese, but also the written form. Sinclair (1988, as cited in Feng, 2009) took up the idea of semantic prosody, which developed the term of “rhythm” in linguistics and applied it to the collocation of phrases. According to the atmosphere evoked by the collocation of phrases, semantic prosody was divided into three groups: positive prosody, neutral prosody and negative prosody. These divisions bring some insights to teaching vocabulary to both domestic and international students. Semantic segmentations caused by rhythmic inaccuracy frequently appear in international students’ writing. Feng (2009) gives several reasons for this: the diversity and complexity of the Chinese language, negative transfer of either the native language or other foreign languages, negative suppression of the target language, and unsuitable rhythmic education. As for rhythmic education, interestingly, some scholars have considered there is no need to correct every single type of rhythmic error.
(Zhang, 2015); the focus should be only on those that may make a great difference to the accent and intelligibility.

2.5 Concluding Remarks

Definitions of rhythm and typologies of language have already been clarified by experts, and there are many previous studies based on music rhythm or speech rhythm, for instance, on the relationship between music and linguistics, on music educational functions and teaching strategies and on speech rhythm teaching. However, few studies focus on teaching Mandarin to English speaking children. An exception is the study by Zhang and Tsurutani (2013), which links language rhythm to teaching Chinese as a second language. The author has taken inspiration from this study.

The careful study by White and Mattys (2007) suggested that rhythmic differences exist between and within languages, providing insights into the process of accommodation to a second language. They presented a comparative evaluation of metrics for the quantification of speech, aiming to verify the influence of first language (L1) on second language (L2) rhythm. This kind of influence is intrinsically difficult to interpret. Surprisingly, they proved rhythm scores were different in native and target languages. They observed the extent to which these metrics discriminated stress-timed languages such as English and Dutch and syllable-timed languages such as Spanish and French, and then applied these metrics to quantifying the influence of first language on second language rhythm.

Nevertheless, information from studies so far is confined to the rhythm-based language teaching approach for English as L2, or Chinese as L1, which is not comprehensive. Experiments are rarely done on the basis of a rhythm-based language teaching approach for Chinese as L2, which is not conducive to widening the scope of rhythm education.

This study will emphasize the employment of a rhythm-based language teaching approach to make Chinese more easily learnable as a second/foreign language. Music rhythm and speech rhythm are combined as two main tags of the study. Quite a few schools in the Western Sydney region have engaged in the ROSETE program, enabling the author to conduct this research.
Chapter 3 Methodology

This chapter outlines the methodology used in this thesis, mainly describing the process of qualitative action research, including research design, data sources, methods for data collection and data interpretation. Principles of research, such as ethical issues, reliability and validity, and generalizability are also discussed in this part.

3.1 Qualitative Research

Qualitative research and quantitative research are two main methodologies in educational research. Qualitative research is “a situated activity that locates the observer in the world” (Denzin and Lincoln, 2000, p. 3). It involves a variety of empirical strategies that aim to describe the researcher’s knowledge and the data generation as well as application process (for example, case study, observational texts, interviews, personal experience and so on). Qualitative researchers stress the qualities of entities, processes and meanings, actively seeking answers to the questions that emphasize how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, paying meticulous attention to the actual things that happen in the world (Stake, 2010). In other words, qualitative research studies ask “how”, “what” and “why” questions, while quantitative research attaches importance to “how often” and “how many” (Buston et al., 1998; Draper, 2004).

In this study, the researcher focused on qualitative research for the following reasons. First and foremost, as far as this research is concerned, the major aim was to investigate how a rhythm-based teaching approach makes Chinese learnable in a primary school in the Western Sydney area. It was much closer to “how”, “what” and “why” questions than to “how often” or “how many”. Second, the teacher-researcher relied on the participants’ engagement and feedback as well as the experience of the researcher herself. Therefore, being primarily based on human perception and understanding, the subjectivity of this experimental research outweighs its objectivity.

3.2 Action Research

3.2.1 Definitions

Action research, according to Carr and Kemmis (1986a), is “a deliberative process for
emancipating practitioners from the often unseen constraints of assumptions, habit, precedent, coercion and ideology” (p. 192). Thus it seems that action research will develop researchers by leading them towards professional growth and improved practice. Action research connects theory to practice, encourages teacher-researcher empowerment and intellectual engagement. Carr and Kemmis also pointed out (1986b, p. 162):

Action Research is simply a form of self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out.

As mentioned above, action research is suitable for researchers who are at the same time the subjects of the research. In this educational study, the researcher herself teaches pupils in the Western Sydney region. Self-reflective practice links the inquiry to actions in a given context and emphasizes the role of human inquirers as acting subjects in a holistic situation.

Another comprehensive exploration, by Denzin and Lincoln (2000), defined action research as “research in which the validity and value of research results are tested through collaborative insider-professional researcher knowledge generation and application processes in projects of social change that aim to increase fairness, wellness and self-determination” (p. 94). Action research, built on interaction and collaboration by all participants, is based on the premise that credibility, validity and reliability are measured by the willingness of all engagers.

### 3.2.2 Cycle implementation

It is widely acknowledged that the process of action research occurs in cycles of implementation. Various models for the action research process have been proposed by numerous researchers and authors. Though they look a bit different from one another, common elements are revealed through dynamic development. Kemmis and McTaggart (1988, p. 10) explain:

- **Planning:** to develop a plan of critically informed action to improve what is already happening
- **Observation:** to observe the effects of the critically informed action in the context in which it occurs
- **Action:** to act to implement the plan
**Reflection:** to reflect on these effects as a basis for further planning, subsequent critically informed action and so on through a succession of cycles

Action research models usually begin with the planning of a central topic, involve some monitoring of current practice and are then followed by some sort of action, which functions as the basis of further reflective development for the next stage. The direct view of inseparable and legible relations between the steps of action research has been presented by Denzin and Lincoln (2000, p. 596):

![Figure 1. The Denzin and Lincoln model of action research](image)

Action research occurs in spiral rather than linear fashion. The central axis is the main research question, leading the way to deeper exploration. Researchers engaged in action research doubtless find themselves repeating some of the steps over and over again. Piggot-Irvine (2006, as cited in Mertler, 2012, p. 19) put forward a cyclical model for the action research process:
Because of their shared elements, the researcher regards these as variations on the same theme. Action research allows teacher-researchers to observe their own classroom, instructional methods, students and assessments. During the process from current situation analysis, to improvements implemented, to the review of changes, teachers are always encouraged to take risks to adjust their instructional practice to what they believe to be more appropriate. Mertler (2012, p. 38) shows a similar but more developed dynamic process of action research:

This model is composed of four stages: planning, acting, developing, reflecting. The planning stage, prior to the implementation of the project, aims to identify and limit the topic, gather related information and review literature, and thus develop a research plan. The acting stage includes collecting and analyzing data. The developing stage, in essence, is where the
revisions, changes, or improvements arise and actions are expanded. The reflecting stage summarizes the results of the study, creates a strategy for sharing and communicating results and reflects on the entire process.

The teacher-researcher carried out the study on the basis of Mertler’s (2012) model of action research. Rhythm-related contents and activities for the whole term were designed in advance, which is regarded as the process of planning. While the whole term planning is part of a big cycle, lesson plans before each individual lesson represent smaller cycles of implementation. In each lesson the research conducted is considered as the process of an act. The developing process retrieves data from interviews with and feedback from classroom teachers as well as students. Self-reflective journals to review each past cycle bring effective insights to the planning of the next cycle.

3.3 Principles of Research

3.3.1 Ethical issues

“Codes of ethics are the conventional format for moral principles” in professional and academic research (Denzin and Lincoln, 2000, p. 138). As Northway (2003, cited in Flick, 2009, pp. 40–41) states, “all aspects of the research process, from deciding upon the topic through to identifying a sample, conducting the research and disseminating the findings, have ethical implications”.

All participants have the right to informed consent and voluntarily and willingly agree to take part, without any physical or psychological coercion. Research subjects acquaint themselves in advance with open and comprehensive information about the study. All participation is consistent with commitment to individual autonomy.

Privacy and confidentiality of participants shall be taken into serious consideration. The research inquirer is expected to insist on safeguards to protect people’s identities as well as research locations. Aliases are widely used to avoid unwanted exposure and harm. Consequently, it is necessary to negotiate and reach extensive consensus on what is public and what is private.

In addition, accuracy is one of the cardinal principles in ethical consideration. The search for
knowledge is obligatory and not contrary to the interests of participants, while deception is codified as morally unacceptable and is uniformly opposed.

The participants of this study were primary school students and teachers in Western Sydney. Therefore, documents or projects concerning children’s safety in Australia were applied before conducting the research. Information about participants is employed in such a way that it is impossible for others to use it or identify the referent.

Last but not least, the researcher is expected to be honest, from selection of the research theme to reporting of the conclusions. The data collected should be accurate and credible. Adherence to standards of academic honesty is mandatory.

### 3.3.2 Reliability and validity

Traditionally, qualitative action researchers have been anxious to identify more appropriately how they do what they do. Rather than simply take terms from the paradigm, they “have correctly offered alternative ways to think about descriptive validity and unique qualities of case study work” (Denzin and Lincoln, 2000, p. 569).

To guarantee the reliability and validity of the research, the teacher-researcher spared no effort to reduce any possible limitations during the process, to examine her teaching performance, and to adjust her teaching skills assiduously.

Great attention shall be attached to the diversity and the triangulation of data sources and collection methods. As Pine (2009, p. 82) argues:

> A common procedure used to ensure the rigor of action research is triangulation, a process in which multiple forms of diverse types of evidence and perspectives are used to check the validity and reliability of action research outcomes.

The triangulation of data sources for this study was embodied in three groups of people: the teacher-researcher herself, the primary school students, and the classroom teachers, including the principal. Methodological triangulation found expression in observations, assessments and reflections.
3.3.3 **Generalizability**

Generalizability, “the extent to which findings from an investigation can be applied to other situations is determined by the people in those situations” (Merriam, 1995, p. 58) and is of great importance in qualitative research.

This study applied action research to exploring how to make Chinese more learnable by using a rhythm-based language teaching approach. Since action research is usually conducted with a pre-existing group of people, it may not be highly generalized in representing random selection from a larger population. With the awareness of such limitations, in the following chapters the teacher-researcher has provided sufficient information about the study to enable others to draw an analogy.

The findings of this study on a rhythm-based language teaching approach contribute to the implementation of teaching Chinese. Students of non-Chinese background, beyond the participants of the study, may also benefit.

3.4 **Data Collection**

3.4.1 **Site selection and participants**

As a volunteer Chinese language teacher in the ROSETE program, the teacher-researcher was assigned to two primary schools in Western Sydney for one and a half years. The schools engaged in the ROSETE program were all eager to have Mandarin classes taught there, which enabled her to implement this action research smoothly. Tianyuan primary school (name changed to protect participants) was the main research site; only a few parts of the observation notes came from the other school. Classroom teachers were also present in the classes to support the teacher-researcher.

The participants comprised three groups. First, the teacher-researcher herself, as the research designer and Mandarin teacher, was an indispensable participant in the study. The second group was classroom teachers, who observed and assisted at every lesson given by the researcher. They were a valuable and remarkable resource in this action research. Students of Tianyuan primary school were the third group of participants. Two classes, Year 5 and Year 6, were selected as the main subjects of the study. The students in these classes were beginner learners of Chinese, having had no previous access to formal Chinese learning, which made it
easier to assess the effect of a rhythm-based language teaching approach. The students had Chinese classes every week, which allowed the research to be conducted continuously.

3.4.2 Data sources and collection methods
As there were three groups of participants, the data sources were of three types as well. Table 1, below, presents their details.

<table>
<thead>
<tr>
<th>Data Sources</th>
<th>Teacher-researcher</th>
<th>Classroom teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson plans, observation notes, self-reflective journals</td>
<td>Interviews, observations</td>
<td>Work samples, interviews, recordings</td>
<td></td>
</tr>
</tbody>
</table>

Data collection methods, essential to each study, are listed in the table, involving lesson plans, observation notes, self-reflective journals, interviews, students’ working samples, recordings of the class. Particularly, the teacher-researcher instigated interviews, observations and self-reflective journals, as discussed below.

3.4.2.1 Interview
Interview, the art of asking questions and listening to answers, is a much harder task than it may seem at first. It is “one of the most common and powerful ways in which we try to understand our fellow human beings” (Denzin and Lincoln, 2000, p. 645).

Interviews may be structured, unstructured or semi-structured. In a structured interview, the interviewer asks all interviewees the same pre-established questions, and open-ended questions are used infrequently. Unstructured interviews tend to draw out information in a more conversational style around specific themes, without the aid of predetermined questions. The researcher applied the semi-structured interview format to this study. This generally begins with some defined questions but proceeds in a more flexible fashion, which permits a greater breadth of data to be gleaned and may see questions answered in an order more natural to the flow of conversation.
Frankly speaking, the qualitative interview is indeterminate since the complexity of conscious and unconscious thoughts, feelings, desires and needs of both interviewer and interviewee cannot be captured predictably. Qualitative researchers have realized that the interview is not a completely neutral tool for gathering data. It is influenced by the personal characteristics of both parties, such as class and ethnicity, thus leading to negotiated, contextually based results through active interactions.

In order to minimize the limitations mentioned above, steps of the interview process ought to be carefully developed to plan, pilot, modify, interview and analyze data. The researcher needs to prepare an interview schedule and data recording system, develop a contingency plan, familiarize herself with the equipment, and make appointments early, allowing for interview time as well as waiting around time. If possible and allowable, audio or video recording should be used to preserve raw data for review at a later date, allowing the interviewer to focus on the immediate question and answer process.

Access to some tips for interviewing will greatly benefit the researcher and interviewer. First, the design of questions is at the top of the interview agenda. Following the principle of being clear, logical and professional, the interview questions should not be based on unwarranted assumptions, and the researcher should stick to ethical issues. Further, the interviewer should seriously consider his or her personal presentation, including what role to take and how to be involved in the conversation. The interviewer should listen more than talk, ease respondents into the conversation by asking appropriate questions, keep the discussion moving and wind it down at the right time. It is the skills of felicitous prompting and probing that facilitate the interviewee’s ability to answer (O’Leary, 2004). Prompting provides the interviewee with cues to jog the response, such as, “that is really interesting, but I would like to know something about...”. Probing can be through comments, questions, an inquisitive look or a few moments of silence, which help the interviewer dig for more information: “really”, “why”, “tell me more”. Being mindful of the time enables the interviewer to end the interview with a full range of data gathered. Positive body language is encouraged. Egan (1994, as cited in O’Leary, 2004, p. 167) proposed the SOLER model for the interviewer. “Square on” means that the interviewer faces and pays full attention to the interviewee. “Open posture” reveals a willingness to accept information, thus encouraging the interviewee to feel non-defensive. “Lean forward” and “Eye contact” signify involvement and interest, but too much may be regarded as aggressive and may make the interviewee nervous. “Relax”
represents a relaxed flow of information, accompanied by smooth and non-jerky movements.

In this action study, the researcher interviewed two classroom teachers in semi-structured interviews, which allowed her to put forward more questions accordingly. These teachers were witness to every class, and were thus able to make an objective evaluation of lesson content, teaching methods and students’ performance. The list of interview questions for classroom teachers is attached in Appendix 8. A group of 10 students was recruited from Years 5 and 6 as a focus group. The method of stratified random sampling was employed, which involved dividing students into various subgroups and then taking a random sample within each group. This ensured that each student had an equal chance of inclusion and the selected sample represented key subgroups of the population. Participants were empowered to make comments in their own words, while being stimulated by thoughts and comments of others in the group (Robert, 2011, p. 285). Interview questions were aimed at students’ direct view of Chinese lessons, and degrees of acceptance and understandability of the rhythm-based activities implemented. Appendix 9 presents the list of semi-structured interview questions to students, both the original version and the revised version. The interviews with the two classroom teachers and the focus group of students were conducted at the end of Term 3.

3.4.2.2 Observation

Observation, as a means of collecting qualitative data, involves carefully watching and systematically recording what one sees and hears in a particular setting (Schmuck, 1997, as cited in Mertler, 2012). As with the interview, there are structured, unstructured and semi-structured observations. In semi-structured observations, observers not only use a schedule or checklist to organize observations, but also attempt to observe and record unplanned or unexpected happenings.

The semi-structured observation in this action study was devised in six steps: plan, observe, record, review, refine, and analyze data. The observer was required to realistically consider access to or acceptance by the group and the situations and activities she wished to observe. Given the chance, the researcher was eager to observe music lessons and English literacy lessons at the research site, in which a rhythm-based teaching approach is frequently employed. The teacher-researcher spared no effort to use all her senses and intuition to gather a full range of data. Photographs and audio recordings assisted as a vivid means of recording
observations, once permission was obtained. Subsequently, the teacher-researcher reviewed the process and reflected on the difficulties encountered, such as time taken, engagement, cultural ignorance, comfort zones, recording/note-taking, roles and objectivity. Sharing the observation notes with visiting teachers, a brainstorming session among peers elicited new ideas. Complementary to the interview, observations also took place outside the classroom, with the aim of gaining acquaintance with the children’s daily activities and finding clues to making Chinese more easily learnable.

The teacher-researcher, as a full participant, recorded observations obtained from her own Chinese class in a self-reflective journal, while observations from other resources were documented in observation notes.

3.4.2.3 **Self-reflective journal**

The self-reflective journal is a significant method of collecting data in action research, since the teacher-researcher does not learn directly from experience, but from reflecting on experience. As a platform for understanding oneself as teacher, the self-reflective journal clearly presents the teaching process in narrative accounts, describes the planning and outcomes of curricula, instructional and relational activities, and captures ideas, thoughts, insights, feelings and reactions to what has occurred. With professional reflection on practice, a self-reflective journal offers a place for teachers to dig out problems, explore the corresponding reasons and make improvements accordingly, allowing them to revise lesson plans with careful consideration about these problems (Pine, 2009). A self-reflective journal sustains the professional competence of teachers and their ability to make professional judgments.

In this study, a self-reflective journal entry was written after each lesson. In order to write a comprehensive and valuable journal, the teacher-researcher compared the real outcomes with the planned ones, took an overview of the whole lesson, and applied this reflection to the next cycle of action research. Thus, the self-reflective journal consisted of three parts: lesson plans, observations obtained from the viewpoint of the teacher-researcher, and feedback from the classroom teachers and students. Attempts to engage, think, use, sustain, and practice with reflection enabled the teacher-researcher to reflectively analyze the research data. She evaluated her Chinese classes with attention to the standards shown in Table 2, below.
Table 2. Standards for self-reflective journals

<table>
<thead>
<tr>
<th>Lesson Preparation</th>
<th>Classroom Climate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Appropriateness of method</td>
<td>2. Effective overall classroom management</td>
</tr>
<tr>
<td>3. Outcomes clearly evident</td>
<td>3. Positive reinforcement used</td>
</tr>
<tr>
<td>4. Linking progression of lesson flow</td>
<td>4. Issues identified quickly and acted upon</td>
</tr>
<tr>
<td>5. Resources identified and available</td>
<td>5. Consequences made known and acted upon</td>
</tr>
<tr>
<td>7. Involvement of all students throughout the lesson</td>
<td>8. Adequacy of class records</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson Introduction</th>
<th>Professional Personal Qualities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Room appropriately prepared for lesson</td>
<td>1. Professional appearance</td>
</tr>
<tr>
<td>2. Entry to room</td>
<td>2. Effective communication</td>
</tr>
<tr>
<td>3. Settling down procedure</td>
<td>3. Responsiveness to feedback</td>
</tr>
<tr>
<td>4. Class routines established (e.g. roll checked, homework checked, lateness dealt with, etc.)</td>
<td>4. Evidence of concern for students</td>
</tr>
<tr>
<td>5. Purpose of lesson and links to previous or future lessons clearly defined</td>
<td>5. Approachability</td>
</tr>
<tr>
<td>6. Classroom organisation</td>
<td>6. Application of school policies (e.g. discipline, homework, diary use, being out of class, etc.)</td>
</tr>
<tr>
<td>7. Classroom organisation</td>
<td>7. Adequacy of class records</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson Body</th>
<th>Lesson Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of resources including board, interactive whiteboard, computer hardware</td>
<td>1. Conclusion to lesson</td>
</tr>
<tr>
<td>2. Assessing student learning</td>
<td>2. Setting of homework</td>
</tr>
<tr>
<td>3. Explanations/instructions</td>
<td>3. Orderly dismissal of students</td>
</tr>
<tr>
<td>4. Student participation/discussion</td>
<td>4. Effective use of voice</td>
</tr>
<tr>
<td>5. Effective questioning – spread, type, clarity, re-direct, elicit</td>
<td>5. Pacing of lesson</td>
</tr>
<tr>
<td>6. Student management and discipline</td>
<td>6. Catering for the range of student needs</td>
</tr>
<tr>
<td>7. Effective teaching strategies</td>
<td>7. Lesson content</td>
</tr>
<tr>
<td>8. Effective use of voice</td>
<td>8. Development of student literacy</td>
</tr>
<tr>
<td>10. Catering for the range of student needs</td>
<td>10. Lesson content</td>
</tr>
<tr>
<td>11. Lesson content</td>
<td>11. Development of student literacy</td>
</tr>
</tbody>
</table>

### 3.5 Data Analysis and Interpretation

The voluminous amounts of narrative data, collected in the form of lesson plans, interview transcripts, observational notes, reflective journals, and recorded documents, do not generate conclusions of the research directly, but via the necessary processes of data analysis and interpretation. The management of qualitative materials involves a special set of interpretive practices (Denzin and Lincoln, 2000, p. 637). This complex process “is accomplished through
the development of a system of categorization, often referred to as a coding scheme, which is used to group data that provides similar types of information” (Parsons and Brown, 2002, as cited in Mertler, 2012, p. 163).

“A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data” (Saldana, 2009, p. 3). It does not simply reduce the data, but summarizes or condenses it. “Coding”, from the Greek meaning “to discover”, is the transitional process between data collection and more extensive data analysis, an initial step towards an even more evocative and rigorous data interpretation (Saldana, 2009). It does not just label data, but links data “from the idea to all the data pertaining to that idea” (Richards and Morse, 2007, p. 137). Coding provides an invaluable chance to articulate internal thinking processes and presents windows of opportunity for clarifying new insights and emergent ideas about the data. Coding helps to interpret, analyze and present data in a more refined way.

As the fundamental analytic procedure, a coding scheme functions by breaking down, comparing, organizing, categorizing and conceptualizing data, and therefore enables the methodical retrieval of thematically related sections of the text. To be clear, a direct view of coding scheme is shown in the diagram below.

**Table 3. The process of coding scheme**

<table>
<thead>
<tr>
<th>Raw materials</th>
<th>Coding scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial data</td>
<td>Data reduction</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Data display</td>
</tr>
</tbody>
</table>

On the basis of the six steps of data analysis of Braun and Clarke (2006) (familiarizing yourself with data, generating open coding, categorizing, labeling, thematizing, and conceptualizing), the five steps of Strauss and Corbin (1990) (breaking down, examining,
comparing, conceptualizing and categorizing data) and Mertler’s (2012) three steps (get to know your data, describe the main features of the category, and interpretation), the teacher-researcher developed her own six steps of data analysis with the help of a coding scheme: becoming familiar with the data; breaking down and comparing the data; categorizing; labeling and examining; thematizing; and conceptualizing.

The first step, becoming familiar with the data, was the initial stage of the overall project. Keeping a sense of persistently interrogating the data, the researcher asked herself various types of questions, such as: “How should I treat my data in order to best address my research questions” (O’Leary, 2004, p. 185). Second, breaking down and comparing the data involved in-depth exploration of the collected data – reading and re-reading the data, noting down the main features or characteristics resulting from the comparison of segments of data. Third, the codes were categorized and collated into potential themes. Table 4 shows examples of coding categories as proposed by Mertler (2012, p. 164).

<table>
<thead>
<tr>
<th>Coding Categories Used in the Analysis of the Data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAct</td>
<td>Child Activity</td>
</tr>
<tr>
<td>TBeh</td>
<td>Teacher Behavior</td>
</tr>
<tr>
<td>ObsAct</td>
<td>Observer’s Actions</td>
</tr>
<tr>
<td>Res</td>
<td>Results of My Presence</td>
</tr>
<tr>
<td>CBeh</td>
<td>Child Behavior</td>
</tr>
</tbody>
</table>

This process required that the teacher-researcher make connections between the data and coding, and think about whether the information in each category helped her to understand the research topic and answer the research questions. Fourth, labeling and examining the data aimed to refine the specifics of each theme, generate clear definitions and names for each theme, and examine relationships, similarities and contradictions among these themes. The final two steps were adopted from the original stages developed by Braun and Clarke (2006, p. 87), as shown in
Table 5:
### Table 5. The final two steps of Braun’s and Clarke’s coding process

<table>
<thead>
<tr>
<th>Thematizing:</th>
<th>Selecting vivid, compelling extract examples, analysing selected extracts, relating back of the analysis to the research question and literature. Thematizing these materials, and give a clear clue of the themes – categorizes - codes – raw data.</th>
</tr>
</thead>
<tbody>
<tr>
<td>conceptualising:</td>
<td>The process of conceptualisation is realised through the researcher’s creative and critical use of the concepts appeared in the theoretical and empirical literature reviewed while explaining the themes emerged in the data.</td>
</tr>
</tbody>
</table>

Whichever terms are chosen as a coding scheme, the key is to draw out aspects of the data that can answer the research questions.
Chapter 4 Data Analysis: Students’ Engagement with Learning

This chapter aims to answer the first contributory research question: How are students engaged in learning Chinese with the help of rhythm? The discussion is based on an analysis of students’ engagement during the process of learning Chinese and focuses on exploring the influence of rhythm to better engage language learners. The chapter begins with an introduction, then defines three types of engagement: affective engagement, cognitive engagement, and operative engagement. It explores teacher behavior and student engagement, and finally offers a conclusion with discussion. This chapter results from a review of the literature undertaken simultaneously with the action research.

4.1 Introduction

The data collected during this research, mainly from the teacher-researcher’s observation notes, reflective journals, interview transcripts and students’ work samples, reveals there is a strong possibility that the involvement of rhythm has an effect on the language learners’ engagement. In the field of education, student engagement generally refers to the amount of time and effort students put into their studies and other educationally purposeful activities (Whitton and Moseley, 2014). Scholars have found a strong link between student engagement and academic achievement, an important relationship for learning language (Skinner and Belmont, 1993; Anderson et al., 2004; Fredricks et al., 2004; Munns, Sawyer and Cole, 2013; Whitton and Moseley, 2014). Actively engaging in their classes enables students to learn. Children who use metacognitive strategies, such as regulating their attention and effort, relating new information to existing knowledge, and actively monitoring their comprehension, do better on various indicators of academic achievement. Evidence of achievement exists when students are seen as going beyond what they are asked to do, doing more work than is required, or initiating discussions with the teacher about school subjects (Fredricks et al., 2004).

Students’ engagement in the classroom, according to Munns and Sawyer (Munns, Sawyer and Cole, 2013), occurs when “students think hard (high cognitive), feel good (high affective) and work towards being more productive learners (high operative)” (p. 21). This chapter has analyzed and presented data mainly on these three aspects: affective engagement, operative engagement, and cognitive engagement. Munns et al. (2008) described specific and detailed engagement as follows:
• Greater focus by students on their learning experience
• Students wanting to spend a longer time on their learning experience and share these experiences outside the classroom with friends and parents
• Learning being sustained over long periods and operating at higher levels
• Greater frequency of student-to-student interaction
• Greater risk taking
• Improvement in the quality of work
• Improvement in attendance
• Fewer discipline issues
• Major improvements in retention rates, with groups of previously disengaged and poorly attending students achieving close to the state average attendance rates

This research adopted these definitions of engagement as a guide for observations and reflections. As discussed in the fourth part of this chapter, the teacher-researcher was also regarded as having an important role in the network of engagement; the teacher-researcher planned, acted in, developed and reflected on this action research, and tried to build a classroom environment in which students were motivated, encouraged and respected as Mandarin language learners. The final part of the chapter is the discussion and conclusion, summing up its main ideas and findings. The analysis method of mixed coding is employed in this chapter. For example, emotion coding (one sub-type of affective coding) is used to analyze the data in section 4.2.1, and evaluation coding is used in section 4.2.2.

4.2 Engagement

4.2.1 Affective engagement
According to Munns and Martin (2005), affective engagement is defined as students’ being engaged in the classroom with positive feelings about, and reactions to, academic content, teachers, peers and the school, including interest not boredom, happiness not sadness and anxiety (Fredricks et al., 2004). It also refers to students’ identification with school (Finn, 1989), which is mainly conceptualized as belonging (a feeling of school being important) and value (an appreciation of success in school-related outcomes). Munns and Sawyer (Munns,
Sawyer and Cole, 2013) agreed with Finn that high affective engagement stresses deeply valuing the learning process, in which teachers as well as students negotiate learning situations that they both enjoy.

The most favorable learning occurs in a setting of low anxiety, high self-confidence and motivation. One way to achieve this in language learning is to lower affective barriers, something which music can do (Engh, 2013). Students’ feelings and emotional responses are nonverbal cues that tap into their inner cognitive system of learning, enabling the teacher-researcher to infer underlying effects of a rhythm-based teaching approach, and to sympathize and empathize with students’ affective engagement in, for example, Mandarin classes. Affective coding methods were therefore applied in analyzing the data in this section. Affective coding methods, as opposed to evaluation coding, investigate the subjective qualities of participants’ experience (e.g. emotions, attitudes, values, conflicts, and judgments) by directly acknowledging and naming those experiences (Saldana, 2009). Emotion coding, one sub-type of affective coding, is particularly appropriate for qualitative studies that explore intrapersonal and interpersonal participant experiences and actions. Using emotion coding, the teacher-researcher found that a rhythm-based teaching approach invokes students’ positive emotions, stimulates their interest in learning Chinese, sustains longer motivation for learning and helps them to better affectively engage in Mandarin classes.

From observations of other teachers’ classes and students’ various performances (which included reactions, emotions and attitudes), the researcher of this study, even as a beginner teacher, noticed and understood both the feasibility and importance of rhythm in the teaching and learning process.

I have been newly allocated to Tianyuan Public School in Term 4 of the year 2015 and have had several chances to observe classes delivered by ROSETE 7 volunteer teachers as well as other staff teachers. Today’s language lesson impressed me a lot. Students were obviously bored and tired after several times repeating the names of body parts, but suddenly cheered up as soon as the music of <Head, Shoulders, Knees and Toes> started. They couldn’t help shaking their bodies with the rhythm and couldn’t agree more with the instruction that allowed them to stand up and dance.

(Observation notes, 1 September 2015)
Use of music rhythm in language teaching classrooms reduces the boredom induced by repetitive drills, and produces a relaxed state of mind that makes the brain receptive to input (Engh, 2013). Students’ attitudes to the teaching content changed dramatically, from being weary of simply repeating new vocabularies (“obviously bored and tired”) to being attracted by the music rhythm (“cheered up”). This active change in emotions validates and empowers students to better engage in the learning process. From observation of her own classes, the teacher-researcher also found that when rhythm was involved in learning Chinese, not only did active students initiate participation in the rhythm-related activities and contents, but those who were shy and quiet also showed a desire and aspiration for further knowledge. Their excitement and curiosity about the as yet unknown information was seemingly not dampened by the difficulty or challenge of acquiring it.

I happened to find out it was someone’s birthday today during the process of preparing lessons. Therefore, at the beginning of the lesson, I suddenly announced the news. The atmosphere in the classroom was stirred up as that student’s name appeared on the smart board. That shy girl was obviously taken by surprise when I presented her with a small gift, and she was touched when the rest of the class spontaneously sang the Happy Birthday Song. Unexpectedly, this shy girl excitedly asked for the Chinese version of the Happy Birthday Song. Then more and more students made the same request. I told them “happy birthday to you” is “zhù nǐ shēng rì kuài lè”, and showed them a one-minute video of 生日歌. Amazingly, students became familiar with the sentence structures within a few minutes and pleasantly sang the Chinese version of the birthday song to the girl again!

(Self-reflective journal, 16 March, 2016)

I handed out a work sheet for students to do a coloring activity with the instructions in Chinese. The aim of it is to test students’ reading skills and ability to recognize and tell the differences between similar Chinese vocabularies. Shortly, while others were busily occupied by the task, I noticed one girl sitting there quietly and putting up her hand. I thought maybe she was confused about the task. However, as I walked to her, she happily told me that she had already finished coloring and sincerely asked me, “Miss, is there anything else I can do right now?” I was pleasantly surprised by her speed and effectiveness, especially compared to her desk mate, who was just about to begin coloring. Then I suddenly found out that girl is the same girl to whom we sang the birthday song two months ago.

(Self-reflective journal, 11 May 2016)
This girl’s case strongly suggests that the pedagogical use of rhythm in language acquisition increases language learners’ motivational interest (Engh, 2013) and elicits sustainable affective engagement in linguistic input. She used to be quiet and rarely raised her hand (“shy”), but being “surprised and touched” by her classmates’ singing she was encouraged and suddenly wanted to participate much more than before (“excitedly”, “quietly”, “happily”, and “sincerely”). This change may result from the feeling of becoming part of the learning community, of being recognized as a valuable member of this community and playing a meaningful role for the benefit of all learners (Munns, Sawyer and Cole, 2013). This girl actively asked to learn the Chinese version of the Happy Birthday Song, which illustrated that her emotions led to actions and a positive engagement with learning Chinese. After all, emotions and actions are part of the same flow of events and cannot be separated from each other (Corbin and Strauss, 2008). Scholars also assert that the most effective learning occurs in a favorable setting of low anxiety, self-confidence and high motivation (Engh, 2013). Even after two months, this girl still showed a fully-engaged attitude to learning Mandarin, followed instructions immediately, and finished tasks effectively and accurately. The Happy Birthday Song acts as a medium, a bridge, via which individual language learners lower affective barriers, “receive more input, interact with confidence, and are more receptive to the input they receive” (Richards and Rodgers, 2008, p. 13).

Apart from this girl’s case, there is further evidence that with the help of rhythm, students are better affectively engaged in the language classes and enabled to learn Chinese more easily. Students’ interest in language learning has been stimulated through rhythm, as is shown in

Figure 4. One student’s coloring work sheet
their increased affective engagement. There are two kinds of interest, situational interest and personal interest, which differ from each other and yet are closely connected. Situational interest is transitory, aroused by specific features of an activity, while personal interest is more likely to involve consistent choices to pursue an activity or study a topic and a willingness to undertake challenging tasks (Krapp, Hidi and Renninger, 1992). The following excerpts are retrieved from interviews with two classroom teachers and a focus group of children, at the end of Term 3, 2016.

**Teacher-researcher**: Do you think students are engaged during the class, especially when I teach them songs or conduct rhythm-related activities?

**Classroom teacher A**: They like the rhythm, they love the songs, and they found these activities fun to participate in because they can do it and know peers are experiencing the same thing. So if they accidently say the wrong thing, no one is going to notice. It’s a safe way for them to participate. Because you get children who participate there who never put up their hand and go “I know this one”, but you can get them to participate by supporting their peers.

**Classroom teacher B**: Yes, the songs, they are engaged when they are singing. Some of the students are more engaged because they are interested and they do want to learn.

(Interview with classroom teachers, 21 September 2016)

**Teacher-researcher**: Do you enjoy learning new songs? Do you like our pattern or rhythm exercises? Why?

**Student A**: Yes, I enjoy learning new songs, such as the Color Song, Week Song, Happy Birthday Song, Number Song, and TFboys’ songs.

**Student B**: I like them. It makes it easier to remember, to memorize the words.

**Students C**: Yes, singing makes me feel relaxed, comfortable and safe.

(Interview with students, 21 September 2016)

Students’ affective engagement is related to their attitudes, interests and values. Two classroom teachers, who participated in the teacher-researcher’s Mandarin lessons as observers, provided their objective feedback. They noted the use of rhythm, melody and rhyme as a motivating factor in the Mandarin language classroom, which was a “fun” and “safe” way to make students “interested”. Students’ situational interest was aroused by specific features (“comfortable, relaxed and safe”) of rhythm-related activities, making them willing to study Chinese (“enjoy”, “like”, “love”), gradually developing a personal interest in
undertaking learning tasks. In addition, rhythm-related activities allowed group participation, drawing on ideas of belonging and identification with the social structure. Interaction with peers in singing positively influenced both trust and cooperation, which are primary contributors to the progression of group cohesion and a sense of community (Engh, 2013). With this additional emotional pull, learner immersion may extend across a series of activities or temporal events (Whitton and Moseley, 2014).

Rhythm-based teaching invokes students’ positive emotions, stimulates their interest in learning Chinese and helps them to affectively engage in Mandarin classes. Affective engagement makes it easier to inspire and sustain long-term motivation for learning, which has an effect on the affective states and attitudes that impact the amount of effort a learner expends in acquiring a new language (Engh, 2013), in this case, Chinese, thus making it more easily learnable for students.

4.2.2 Cognitive engagement

Cognitive engagement, compared to affective engagement and operative engagement, is less observable and includes more internal indicators. There has been growing interest in cognitive engagement over the past decade, and several well-known studies have proposed consistent definitions and associations for this type of engagement. Cognitive engagement is related to motivational goals and self-regulated learning (Fredricks et al., 2004), involving a deep understanding of and expertise in various aspects of the learning process (Fredricks et al., 2004; Munns and Martin, 2005), such as self-regulation, relevance of schoolwork to future endeavors, value of learning, and personal goals and autonomy (Appleton et al., 2006). Munns and Sawyer (Munns, Sawyer and Cole, 2013) designed a guide for teachers’ observation of high cognitive engagement by students (p. 28):

- Reflective involvement in deep understanding and expertise
- Students are involved in elements of the dimension of intellectual quality (deep knowledge, deep understanding, problematic knowledge, higher-order thinking, metalanguage, substantive conversation)

Previous neuropsychological cognitive research has investigated the anatomic structure of the brain and its neural functions, suggesting that language and music have important points of convergence and/or overlap. Slevc, Rosenberg and Patel (2008) suggested cognitive theories
of linguistic and musical syntactic processing, postulating that these operations share a common set of processes which function on different structural representations. Linguistic and musical elements are processed in different hemispheres of the brain. Language and music, used concurrently, provide an effective pedagogical methodology to stimulate interest and increase learning motivation. In the Musica Viva concert mentioned in the final section of this chapter, students not only behaved themselves well and participated actively, but some also demonstrated high musical ability and deep understanding through cognitive engagement.

One keen boy in my Mandarin class was lucky enough to be the first volunteer to conduct. His performance was beyond my expectation and imagination. He knew accurately how to start, with the movements that were up, down, and winding up. This nearly perfect coordination, between this boy’s vigorous gestures and the musicians’ cooperative performance on instruments, attracted a burst of applause from everyone.

(Observation notes, 17 February 2016)

This boy, who was a quick learner and had impressed the teacher-researcher in the Chinese lessons, surprised her once again with his deep knowledge of and high-order thinking about the music. It appears that his ability in language is associated with his capability in music. His knowledge about music, especially the application of the terminology of conducting, might have come from his study in the school band or thanks to his careful listening to musicians. Many other students, who had a desire to go beyond stated requirements and had a taste for a challenge (Fredricks et al., 2004), would also have liked to participate as temporary conductors of the music ensemble. Students’ ability in music rhythm had already surprised the teacher-researcher, not to mention their ability in regard to speech rhythm.

If it were not for the speech competition in this district, I would not be clearly aware of students’ promising gifts and incredible performances in speech rhythm. The external supervisor would bring in two or three students to the staffroom and guide them individually. I just sat opposite them so that every detail would be noticed. Students were delighted to read or recite the poems. What made me overjoyed was that they would pay attention to pause, tone, intonation, duration, speech rate and stress.

(Observation notes, 25 May 2015)

When I heard one girl’s reading of the small paragraph, “I had a funny dream last night/ I
grabbed a balloon and flew to the moon”, I felt a cool, fresh spring washing away the dust. The earlier curves of childishness in that girl’s face were now modulated into lines of devotional passion. The supervising teacher thought highly of her reading and praised her, saying, “Good girl”. Later, when I talked with the supervising teacher, I learned that the girl was so self-disciplined that she tried many times by herself at home. No wonder she impressed me the most!

(Observation notes, 25 May 2015)

The above two excerpts accord with the perspective that cognitive engagement, including personal goal orientation, self-regulation and investment in learning, has a robust relationship with academic achievement (Appleton et al., 2006). These candidates in the district speech competition demonstrated their deep awareness and understanding of speech rhythm by their use of pause, tone, intonation, duration, speech rate and stress. Highly cognitively engaged students take more responsibility for the evaluation of learning and focus on deeper levels of reflection (Munns, Sawyer and Cole, 2013). The girl who often practiced reading at home on her own revealed her self-regulation and autonomy in cognitive engagement. Her learning goal was clear enough to empower her with substantive and sustained motivation, making performing poems learnable. These examples are supportive evidence that a speech rhythm-based teaching approach involves students in better cognitive engagement, which is associated with academic achievement in the process of learning Chinese. The following is another example of the powerful magic of rhythm.

Tianyuan Public School celebrated its 150 years anniversary this Wednesday and I was invited to attend the huge assembly. What a coincidence that today was my birthday as well. The moment I got out of the car and walked into the campus, all the Year 5 and Year 6 students rushed to me and presented their birthday wishes. Some of them said, “shēng rì kuòi lè [happy birthday]”, some of them yelled “zhū nǐ shēng rì kuòi lè [happy birthday to you]”, and the rest sang the birthday song in Chinese. I was deeply surprised and touched, not only by their sincere wishes, but also by their long-term memory and flexible application of the knowledge that had been taught.

(Self-reflective journal, 19 October 2016)

Songs have a positive effect on students’ language acquisition and long-term vocabulary memory (Engh, 2013). With the combination of rhythm and rhyme, second language learners find it easier to remember the explicit pronunciation of new words, to apply vocabulary and
grammar focus, and to recall mental rehearsal with ease at a later date. No wonder students still remembered the expression, sentence structure and rhythm of *Happy Birthday* in Chinese six months after they first heard it in Mandarin. “Cognitive engagement can range from simple memorization to the use of self-regulated learning strategies that promote deep understanding and expertise” (Fredricks et al., 2004, p. 28). Students flexibly applied this song on the right occasion (when they happened to know it was the teacher-researcher’s birthday), thus demonstrating their deep understanding and their expertise in relation to it. In the focus group interview, also, students gave feedback about their internal acceptance of the teaching content and their cognitive engagement with rhythm-related activities.

**Teacher-researcher:** Name one way that our class helps you learn new words or ideas.

**Student D:** Singing, work sheets, questions and answers

**Student E:** Singing, videos, actions, pictures

**Student F:** Singing, competitions

(Interview with students, 21 September 2016)

When the teacher-researcher asked students to name one way that helped them to learn new words or ideas in the Chinese lessons, they simultaneously put forward “singing” as their first answer, verifying that rhythm-related activity and a rhythm-based teaching approach better engage students in the cognitive aspect of learning. Students’ cognitive engagement is central to improving their learning outcomes, especially for those at high risk of educational failure (Appleton et al., 2006). With the help of rhythm in the learning process, students tend to develop a flexible problem-solving ability, a preference for hard work, independent work styles, and ways of coping with perceived failure (Fredricks et al., 2004).

### 4.2.3 Operative engagement

Operative engagement, also known as behavioral engagement, has three features (Fredricks et al., 2004). The first entails basic positive conducts (following the rules and adhering to classroom norms) and the absence of disruptive behaviors (skipping school and getting into trouble). The second concerns involvement in learning and academic tasks, including behaviors such as effort, persistence, concentration, attention, asking questions and contributing to class discussion. In this situation, students actively participate in classroom activities and finish tasks well (Munns and Martin, 2005). A third feature involves participation in extracurricular but school-related activities, such as athletics and student
government.

In general, these features all have the same theme: students are involved in learning experiences that are helping them to become more competent and empowered learners. High operative engagement is defined as students actively participating in experiences, working towards becoming more effective learners (Munns, Saywer and Cole, 2013). From this action research, the teacher-researcher found that with the help of rhythm, students participated in the classroom with positive behaviors, such as effort, attention and persistence. They were more willing to complete activities and present cooperative participation and autonomous participation related to rhythm, which lead to comparatively successful academic outcomes in learning Chinese.

To appropriately describe, compare and predict the evaluation of data from student behaviors and participation, an evaluation coding method is applied to this section. Evaluation coding can emerge from the evaluative perspective of the teacher-researcher or from the qualitative commentary provided by the participants (Saldana, 2009). With the positive comment [+ ] and negative comment [−], the teacher-researcher can assign judgments about the merit of rhythm patterns or activities. The use of [+ ] and [−] enables the teacher-researcher to make a quick analysis and assessment of the collected data, and decide what is working to make Chinese learnable and what is not.

As a beginner teacher, the researcher paid close attention to students’ extracurricular activities, especially those rhythm-related activities that could reflect students’ natural reactions and would be helpful in designing her classes. How did students participate in music-related activities outside the classroom? Was that different from what they did in the class? With great curiosity, the teacher-researcher carefully observed their participation in the school Musica Viva¹ concert.

The classroom teacher told me there was a voluntary music concert in the school hall after lunch and invited me to join the audience. Outside the staffroom, students from different classes walked at a brisk pace heading to the lobby. As they quickly settled down, all the students burst into spontaneous applause to welcome the musicians of Musica Viva. But

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¹Musica Viva is an organization which arranges for performing groups to visit schools; teaching materials are provided to the class teachers.
those musicians didn’t turn up at first. Then the second rampant clapping broke out among students. Still nothing changed. The entire audience erupted in the thunderous applause for the third time and then the musicians appeared.

(Observation journal, 17 February 2016)

The talented musicians of this concert used to be music teachers, so they know well how to communicate with children through music. Students were relaxed when the musicians introduced their own instruments in an interesting way. The lobby resounded with waves of warm and even wild cheers. That was really a sumptuous feast! A feast of sound, a highlight for the students! Students were actively involved. They clamored to be the temporary conductor of the concert and raced to demonstrate their ability in conducting and directing the orchestra.

(Observation journal, 17 February 2016)

Figure 5. School Musica Viva Concert

(Observation journal, 17 February 2016)

Time flies! The two hours’ music concert came to an end. Two student representatives from Year 6 walked to the stage and expressed their appreciation of the happiness brought by the musicians and the great efforts made by the teacher in charge. They said they felt grateful to have such a wonderful opportunity to access music. After that, I walked out of the lobby with the students. Along the way back to the staffroom, I could hear their continuous whispers to each other. “Which was your favorite part?” “The most impressive instrument for me is…” “I want to attend this kind of activity again.”

(Observation journal, 17 February 2016)
The above excerpts, describing students’ participation and behavior before, during and after the Musica Viva concert, signify that operative engagement implies a specific commitment to an activity, such as the attention, interest, investment, and effort students expend in learning (Whitton and Moseley, 2014). In the first excerpt, “walked at a brisk pace” and “quickly settled down” relate to students’ interest and attention regarding the concert. Students applauded three times to welcome the musicians (“burst into spontaneous applause”, “clapping”, and “thunderous applause”), indicating their investment of time and sufficient patience in relation to the extracurricular music-related activity. The second excerpt reveals the ongoing process of the music concert. When students were introduced to different types of instruments, they showed great interest and dynamically interacted (“waves of warm”, “wild cheers”, “clamored”, and “raced”). Evidence that the students’ operative engagement had emerged mounted as they raced to be the temporary conductor of the visiting group. This kind of active participation accords with the way they behaved when the teacher-researcher introduced her cucurbit flute, which is mentioned in Chapter 5. The third excerpt covers the period shortly after the end of the concert. Two representatives voiced the heartfelt sentiments of the audience. The students were reluctant to leave the fabulous music concert. To the majority of students, it may not be a once in a lifetime experience; however, it will be remembered and reflected on for years. Students continued to participate positively and zealously even after ringing down the curtain on the concert. Their efforts towards becoming more effective learners were noticed by the teacher-researcher.

The teacher-researcher was inspired by the students’ total participation in the music-related activity from the very beginning to the end. Music-based pedagogy operatively engaged students in a meaningful and practical way. When she employed a similar rhythm-based teaching approach, it struck a spiritual chord with students. One paragraph from the self-reflective journals is illustrative:

After two weeks of learning colors, I thought it was time to show students the Color Song. They had gained the knowledge of Chinese expression of colors, so it was easier for them to understand the lyrics. Students sang along with the song spontaneously, and asked for a second playing of the song, “Miss, can we watch again?” Afterwards, plenty of hands were put up to do a solo performance of this song as soon as I asked the question, “Who would like to have a go?” And the one selected would be extremely excited to have this chance, singing the Color Song in Chinese in front of the whole class. They also advocated a row by
row competition, as well as a competition between boys and girls in singing this song.

(Self-reflective journal, 18 May 2016)

This lesson was about to end in 15 minutes. I handed out two work sheets related to colors at the same time, in order to investigate whether students were able to finish them within the remaining short period of time. What they needed to do was to match the numbers with the Chinese characters to figure out the color codes, then color each level of the pagoda or each part of the turkey tail accordingly. Frankly, they needed to be very familiar with the color words and Chinese characters of numbers, otherwise it would be impossible to finish the time-task. Unbelievably, the majority of students achieved success in these academic tasks. And I noticed they muttered Color Song to themselves – maybe it would remind them and recall the memories. Some of those who didn’t finish in time even stayed in the classroom voluntarily to finish the rest of the work during recess time.

(Self-reflective journal, 18 May 2016)

Figure 6. Students’ work samples of coloring activity

The Color Song played a role in consolidating and demonstrating the outcomes of students’ learning. This rhythmic song allowed students to hold all the vocabulary of colors together (“sang along spontaneously”), stimulated students’ interest in and passion for learning (“asked for a second time”, “watch again”, “advocated row by row competition”, “competition between boys and girls”), helped students to achieve involvement and success in academic tasks (“a solo performance”, “achieved success”), and invoked students’ efforts and persistence (“put up hands”, “muttered the song to themselves”, “stayed in the classroom voluntarily”).
voluntarily”, “finish the rest work”) in order to make Chinese learnable. An objective evaluation regarding operative engagement also emerged from the transcript of the interview with the classroom teachers.

**Teacher-researcher:** How is student performance compared to other classes?

**Classroom teacher A:** I have got some children who … I have got one boy child in particular who stays focused in Mandarin and is a pain in many other lessons, but he enjoys Mandarin lessons, so he is very rarely a behavior problem. But he could be painful at many other times, you know, disruptive, calling out, silly, but in Mandarin, he is not. I would say the kids try really hard because they know how important Chinese is to their future.

(Interview with classroom teachers, 21 September 2016)

<table>
<thead>
<tr>
<th>Positive Comments [+ ]</th>
<th>Negative Comments [- ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stays focused, enjoys, try really hard</td>
<td>A pain, a behaviour problem, be painful, disruptive, calling out, silly</td>
</tr>
</tbody>
</table>

**Table 6. Student behaviors comparison**

Table 6 presents students’ behaviors according to the evaluation coding method. The teacher-researcher found that most of the students in the Chinese class tried really hard. In particular, a student whose behavior was a problem in other classes (painful, disruptive, silly, and calling out), enjoyed and stayed focused in Mandarin lessons. The main reason for this huge difference in participation was that the rhythm-based teaching approach in Chinese lessons better engaged students, and this engagement enabled students to achieve better academic results, which in turn encouraged students to engage more in the learning process.

A rhythm-based teaching approach impacts on students’ operative engagement, elicits positive student behaviors, and promotes problem solving ability and persistence (Anderson et al., 2004). Students who are engaged show sustainable behavioral engagement in learning activities, select tasks at the border of their competence, initiate action when given the opportunity, and exert intense effort and concentration in the implementation of learning tasks. Those who are more engaged in school do, in fact, earn higher grades, score higher on standardized tests of achievement, and show better personal adjustment at school (Skinner and Belmont, 1993). In the case of this study, student engagement helped to make Chinese learnable.
4.2.4 Teacher behavior and student engagement

There is mounting evidence that teacher behavior is associated with student engagement in learning. Over two decades ago, Skinner and Belmont (1993) suggested four basic strategies – attention focusing, relevance, confidence building and satisfaction – that were effective in promoting student motivation, and which still impact on current educational research. Anderson et al. (2004) proved the quality of relationships between students and staff was associated with improved student engagement with the school. Fredricks et al. (2004), also, found that teacher support was an important influencing factor on student affective, operative and cognitive engagement.

In accordance with the notion of the classroom as a message system, the teacher, through pedagogy, the curriculum and assessment, delivers powerful messages to students about who they might become in the future (Munns, Sawyer and Cole, 2013). The teacher-researcher took advantage of the rhythm-based teaching approach to deliver messages to students, develop their engagement as enthrallment (captivation), engagement as feeling (passion), engagement as belonging (affiliation), and engagement as being (incorporation) in Chinese classes. As Anderson et al. have highlighted (2004), students’ perceptions of support from teachers may be an important factor in changes in students’ attitudes and motivation. Students can be deeply inspired once they know that the teacher cares about them. As described in Section 4.2.1, thanks to the unexpected birthday gift from the teacher-researcher and the surprise of the Chinese version of the Happy Birthday Song, the shy girl changed dramatically in emotion and operations, and participated much more actively in Chinese lessons. More examples of the teacher-researcher joining in, energizing, and facilitating efforts to promote students’ engagement in school as well as build a healthier teacher–student relationship are presented in Chapters 5 and 6. The more students engaged in the classroom, the better their achievement in learning the target language, Chinese.

Teachers and students play reciprocal roles in negotiating learning situations that they both enjoy. Skinner and Belmont (1993) also found reciprocal effects in student motivation and teacher behavior. To illustrate, the teacher-researcher extracted a paragraph from her self-reflective journal. It is about excellent work done by students on a complex translation activity, which she found greatly encouraging.
The week after students had learnt the *Color Song*, I designed a translation activity which required them to flexibly apply pronouns, colors and fruits, as well as the sentence structures of positive, negative answers and questions. Frankly, I didn’t have much confidence in how much the students could do of the translation activity. After all, it’s quite a hard task for language beginner. However, beyond my imagination, the majority of students tried really hard and did a good job. Some of them even achieved 100 per cent accuracy, which was totally beyond my expectation. A sense of achievement and satisfaction came to me suddenly, as if all the efforts were worthwhile at that moment.

(Self-reflective journal, 25 May 2016)

![Figure 7. Screenshot of PowerPoint Presentation](image)

![Figure 8. Student’s work sample of translation activity](image)

The pedagogical approach of rhythm-based teaching offered the teacher-researcher an opportunity to build a classroom atmosphere in which students were motivated and challenged and learners’ voices were encouraged and respected. Students were thus given the
chance to become more successful learners and could feel valued within an atmosphere of sharing and reflection. This reflects the importance of “flow of speech” noted in the literature review (see Chapter 2). The translation activities, as shown in Figure 7 and Figure 8, focused on naturalness of speech, highlighted communicative competence and rectified phonemes of language through conversations (Zhang and Tsurutani, 2013). The present study also concurs with the findings of Anderson et al. (2004), that there is a significant increase in students’ engagement (emotional, operative and cognitive) when the teacher is involved. In turn, the students’ deep engagement provides the teacher with a sense of achievement, and encourages the teacher to deliver better lessons, with more confidence and enthusiasm. In the present study, better lessons engaged more students and enabled them to learn Chinese more effectively. The reciprocal effect carries on towards higher goals.

4.3 Discussion and Conclusion

This chapter has answered the first contributory research question: How are students better engaged in learning Chinese with the help of rhythm? It has analyzed three aspects of student engagement during the process of learning Chinese: affective engagement, operative engagement and cognitive engagement. It has explored the impact of rhythm to better engage language learners and has discussed the relationship between teacher behavior and student engagement.

Regarding affective engagement, the rhythm-based teaching approach invoked students’ positive emotions, stimulated their interest in learning Chinese, and helped them to affectively engage in Mandarin classes. Affective engagement is easy to inspire and sustain long-term motivation for learning – the affective states and attitudes that impact the amount of effort a learner is willing to expend to acquire a new language (Engh, 2013). In this study, this made Chinese more learnable for students.

Students’ cognitive engagement is central to improving their learning outcomes, especially for those at high risk of educational failure (Appleton et al., 2006). With the help of rhythm in the learning process, students tend to develop flexible problem solving abilities, a preference for hard work, independent work styles, and ways of coping with perceived failure (Fredricks et al., 2004).

In terms of operative engagement, a rhythm-based teaching approach involves positive
student behaviors and promotes students’ problem solving abilities and persistence (Anderson et al., 2004). Students who are engaged show sustainable behavioral engagement in learning activities, select tasks at the border of their competence, initiate action when given the opportunity, and exert intense effort and concentration in the implementation of learning tasks. Those who are more engaged in school do, in fact, earn higher grades, score higher on standardized tests of achievement, and show better personal adjustment to school (Skinner and Belmont, 1993). In this study, all these factors made Chinese learnable.

To sum up, with the help of rhythm, students actively participated in the Chinese classes via affective engagement, operative engagement and cognitive engagement. High engagement in the class resulted in better academic achievement in learning Chinese. Rhythm and language not only can, but should, be studied together.

This research is based on one and a half years’ teaching of Mandarin, and thus has a limitation on time frame. If the teacher-researcher is given a chance in the future, she will further study and practice the idea of “flow” in the engagement field. Flow is a subjective state of complete involvement, where individuals are so involved in an activity that they lose awareness of time and space (Csikzentmihalyi, 1988). The notion of flow provides a conceptualization of high involvement or investment.
Chapter 5 Data Analysis: Roles of Rhythm

This chapter presents answers to the second contributory research question: What role can rhythm play in increasing the learnability of Chinese for students? Data extracted from the teacher-researcher’s observation notes, reflective journals, interview transcripts and students’ work samples show that a rhythm-based teaching approach plays an important role in the before-class stage, the class-processing stage and the post-class stage, and indicate that Chinese is made more easily learnable through the pedagogy of rhythm. This chapter is based on a review of the literature and on the teacher-researcher’s own action research.

5.1 Introduction
Chapter 5 discusses data and presents the outcomes of the study in regard to the role of rhythm in the before-class stage, in the class-processing stage and in the post-class stage. Children in the pre-active stage adopt the rhythm of their first language; rhythm teaching caters for students’ natural characteristics, stimulates learning interest and makes them feel relaxed and confident. A Rhythm-based teaching approach enhances students’ comprehension and reduces the pain/gain ratio during the process of learning. Even after classes, the use of rhythm makes it easier for students to remember the learning content, sustains long-term motivation and helps to establish a healthier teacher–student relationship.

According to Oxford English Dictionary (2016), “learnability” is “the quality or fact of being learnable”. Learnability is a subject of cognitive science (Fulop and Chater, 2013), concerning questions such as: When is learning possible? What prior information is required to support learning? What resources are required for learning to be possible? To what extent can knowledge be derived from experience?. Pedagogically, in increasing Chinese learnability, primary consideration is given to reducing the cognitive load placed on beginner language learners (Singh et al., 2014). This requires the teacher-researcher to focus on learner-centered methods and adopt a student-oriented approach to the teaching of Chinese. A rhythm-based teaching approach, from the perspective of non-Chinese background language learners, imbues Chinese with music rhythm and speech rhythm, and applies knowledge of how learners perceive sounds, tones and languages, thereby increasing Chinese learnability.

5.2 The Role of Rhythm in the Before-class Stage
5.2.1 Catering for students’ natures

Evidence for strong relationships between music and language is provided by research in the fields of cognitive science, anthropology, sociolinguistics, psycholinguistics, first language acquisition and second language acquisition (Engh, 2013). Physical anthropological research hypothesizes that humans evolved song before speech, which indeed links children’s first experience of music and language (Barrett, 1990). Children’s early stage language attempts often contain music characteristics. Music and language share the same vehicle for expression, the voice, with a consequent emphasis on the aural medium. Such research indicates that a rhythm-based teaching approach caters for elementary students’ natural characteristics in the early language development stage.

Singh, Han and Ballantyne (2014) advocated that volunteer Chinese teachers should learn to select contextually and age-appropriate teaching content for non-Chinese background students. In keeping with the hypothesis that song, chant, rhythm, rhyme and repetitive language should be situated as aids to learning strategies in the language classroom, the teacher-researcher focused on observing students’ characteristics and Mandarin learning level when the class involved rhythm. In order to better carry out the next cycle of teaching, the teacher-researcher reflected on and evaluated these specific features in the term report, especially editing the school and student profile to discuss students’ characteristics and their rhythm-related Mandarin learning experience. Table 7 illustrates that rhythm caters for the general nature and characteristics of primary school students.

Table 7. School and students profile from term report

<table>
<thead>
<tr>
<th>Background</th>
<th>Tianyuan Primary School, Year 5 and Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>General student characteristics</td>
<td>Year 5: Students are exposed to an active study atmosphere. They are well-disciplined, respectful, show initiative, are cooperative, hard-working and creative. The majority fully engage in the class, feel honored to have a chance to answer questions, and are eager to know more about Chinese culture and language. Year 6: There are two groups of students: one group is more academic and always behaves well, while the other group shows the natural rebellion of teens. But the groups both show their natural appreciation of rhythm.</td>
</tr>
</tbody>
</table>
| Students’ Mandarin-learning experience | Year 5: *Number Song, Week Song, Birthday Song, Finger Family Song*, five tones in pinyin, and other rhythm patterns.  
Year 6: *Number Song, Birthday Song, New Year Song, Color Song, Jasmine Flowers, TFboys (Youth Practice Manual)*, and other rhythm patterns. |
5.2.2 Stimulating students’ learning interest

The use of rhythm in language acquisition stimulates the interest of language learners (Engh, 2013). Before being exposed to the formal learning content, students will have already shown a learning interest invoked by rhythm. On the basis of her own action research, the teacher-researcher firmly believes this to be true.

I was thinking about the way of self-introduction to students at the first meeting at Tianyuan primary school, then suddenly caught a glimpse of a traditional Chinese instrument, the cucurbit flute (hú lú sī), which I had brought with me from China. Why not use it to introduce my hobbies and to let students get to know about me? As I had expected, the students’ eyes were sparkling with joy and they kept asking me, “Miss, what’s this? Is it a flute?” They were so eager to see my performance right away. During my performance, I noticed the students all sitting there beautifully and listening carefully. They concentrated on my fingers flying and landing on the sound holes. As I was about to finish the performance, the whole class burst into a round of applause, with enormous enthusiasm gleaming in their eyes. The fascinating melody wrought by the cucurbit flute also attracted students from other classes to come and join a crowd of onlookers. They were self-motivated to know more about the cucurbit flute and showed willingness to let me play it again.

(Self-reflective journal, 28 January 2016)

The classroom teacher, an experienced teacher, chatted with me after the class and thought highly of the teacher-students’ interaction during the lesson. “The instrument performance exactly stimulates students’ learning interest. They enjoyed the way you introduced yourself, and became interested in you and the lesson you are going to teach.” She also took some photos of my playing the cucurbit flute for students and posted them in the school newsletter.

(Self-reflective journal, 28 January 2016)

Figure 9. School newsletter about cucurbit flute performance
These self-reflective journal excerpts were extracted from the early stage of this action research, when the teacher-researcher was intent on exploring the possibility of leading students into a magical and mysterious Chinese world via rhythm. To Australian students, the cucurbit flute, compared to western instruments, such as piano, violin, guitar, trumpet, drum, trombone, clarinet, oboe and cymbals, was a novel and fresh Asian-style instrument, instantly attracting students’ attention to oriental culture. The natural reaction and response of students in the class was direct evidence, while the informal conversation that took place between the classroom teacher and the teacher-researcher provided indirect reflection and valuable feedback. Both indicated that students tend to behave themselves well under the influence of rhythm. Once students’ interest is stimulated by rhythm, they will be attracted by the teaching content.

Gould (2009) explored the relationship of music literacy and subjectivity, and argued that there is potential to connect music education to lived experience in which students and teachers engage both within and outside of institutionalized educational settings. The teaching content is supposed and encouraged to originate from and pay back to lived experience. Through the medium of the cucurbit flute, the teacher-researcher successfully extended students’ interest in a Chinese instrument to the desire to learn more about Chinese culture and language. Error! Reference source not found. illustrates how the cucurbit flute performance caught students’ attention and had an effect on the later development of learning interest.

Table 8. Students’ learning interest aroused by the instrument

<table>
<thead>
<tr>
<th>Cucurbit flute (hú lú sī) performance</th>
<th>one the one hand</th>
<th>on the other hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>stimulates students’ interest in the performer (the teacher-researcher)</td>
<td>works together</td>
<td>stimulates students’ interest in oriental culture and language</td>
</tr>
<tr>
<td>develops students’ learning interest on oriental language and culture delivered by the teacher-researcher (in expectation to Chinese lessons).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The cucurbit flute (hú lú sī) performance stimulated students’ interest in the performer (the teacher-researcher), and also stimulated students’ interest in oriental culture and language. These two factors worked together to develop students’ learning interest in the lessons in oriental culture and language to be delivered by the teacher-researcher. In other words, students have an expectation concerning the teacher-researcher’s Chinese lessons even before they begin, comparable to a before-class stage.

5.2.3 Making students relaxed and confident

Engh (2013) argued that the most favorable learning occurs in a setting of low anxiety, self-confidence and high motivation. Music lowers affective barriers and assists in making students more relaxed and therefore more receptive to language learning. The teacher-researcher agrees with Engh that rhythm makes students relaxed and confident at the before-class stage.

Greetings are the basis of each language and were at the top agenda of the teacher-researcher’s lesson plan. However, it seemed that simple repetitions of the vocabulary could not achieve the expected effect, and even the cleverer class was more confused than it should have been. Nevertheless, there were amazing results when the teacher-researcher showed students the Greeting Song.

The nervousness about an alien language disappeared as soon as the Greeting Song began. Students automatically started to imitate the singing in the video, and danced to the rhythm. They added gestures for different greetings; they waved right hands to say “nǐ hǎo [hi]”, nodded heads to say “xiè xiè [thank you]”, bowed to say “duì bù qǐ [sorry]”, shook their index fingers front of their noses to say “bù yòng xiè [you are welcome]”, stretched arms to say “zǎo shāng hǎo [good morning]”, put palms together and closed eyes to say “wǎn shǎng hǎo [good evening]”, and so on. They felt relaxed rather than awkward, and became more confident in saying the greeting words in Chinese.

(Self-reflective journal, 10 February 2016)

Nursery rhymes, such as the Greeting Song, enhance students’ vocabulary and language development, accelerate phonetic awareness, and increase confidence and courage in language learning. The combination of animated videos and vivid gestures, which brings nursery rhymes to life, is great for making students relaxed and confident. Following the
teaching experience from the *Greeting Song*, the teacher-researcher decided to exhibit the *Finger Family Song* in advance of presenting the Chinese expressions about family. The lyrics of *Finger Family Song* are as below:

Dad finger, dad finger, where are you? Here I am, here I am, how do you do? Mum finger, mum finger, where are you? Here I am, here I am, how do you do? Brother finger, brother finger, where are you? Here I am, here I am, how do you do? Sister finger, sister finger, where are you? Here I am, here I am, how do you do? Baby finger, baby finger, where are you? Here I am, here I am, how do you do?

(Observation notes, 24 February 2016)

The *Finger Family Song* is a well-known nursery rhyme among English-speaking countries and is especially suitable for language beginner learners. It is an effective and relaxing way to develop new knowledge on the basis of students’ prior knowledge. Except for the name of each new family member, the rest of the lyrics remain the same, repeated several times. The teacher-researcher wondered if it was possible to replace “dad, mum, brother, sister and baby” with their Mandarin translations, so that students would be able to grasp the meanings of “bà ba, mā ma, gē ge, jiē jiē, bǎo bāo” more quickly. The teacher-researcher then put her thoughts into practice, which turned out to be a huge success. Students comprehended the Chinese expressions for family members very quickly and introduced them into singing, for example, “Bà ba finger, bà ba finger, where are you? Here I am, here I am, how do you do”. Students, together with the teacher-researcher, also made finger family puppets and put them on their corresponding fingers – dad puppet on thumb, mum puppet on index finger, brother puppet on middle finger, sister puppet on ring finger and baby puppet on little finger (see Figure 10). It was a musical blast for language learners to perform a puppet show as they sang along to this nursery song.
Figure 10. Making finger family puppets in the Chinese lesson

The expression of greetings and the names of family members is entry-level knowledge in learning Chinese. The employment of the *Greeting Song* and the *Finger Family Song* in the class made students relaxed and confident in learning the new language.

5.3 The Role of Rhythm in the Class-processing Stage

5.3.1 Enhancing students’ comprehension

Specific language skills, such as comprehension, can be effectively developed with the use of music and song (Engh, 2013). This study also found that a rhythm-based teaching approach enhanced students’ comprehension in the learning of Chinese. The catchy rhythm patterns used in the class provided students with clearer ideas about the meaning and usage of new vocabularies.

The proper utilization of clapping hands would be visualized to introduce nouns of locality, such as shàng [top], xià [bottom], zuǒ [left], yòu [right], qián [front], hòu [behind], and zhōng [middle]. Without the help of body percussion, students would easily mix these up. I clapped my hands twice overhead while pronouncing “shàng shàng”, and the students copied me immediately. They understood at once that it means the position of “top”. Then I clapped my hand twice on the left side of my body and repeated “zuǒzuǒ”. Students were such quick learners, imitating both gestures and sounds. We clapped our hands in corresponding positions, which were good interpretations of sounds. “Shàng shàng, xià xià, zuǒ zuǒ, yòu yòu, qián qián, hòu hòu, zhōng zhōng zhōng” turned out to be like a catchy rhyme.

(Self-reflective journal, 14 March 2016)
With permission, the teacher-researcher made a recording of the direction rhythm that the children sang in the class. After repeating rhythm patterns several times, all the students were required to follow the teacher-researcher’s instructions and point in the corresponding directions. Elimination was used to make the practice more competitive the first time, but this did not happen since everyone did such a fantastic job that they hardly made any mistakes. This activity verified that the students became quick language learners who fully understood the teaching content. In the interview with students, they also said they considered this rhythmic clapping as the most fun, or the best part of Chinese lessons.

**Teacher-researcher:** What is the most fun or best part of our lesson? Why?
**Student A:** The rhythmic clapping. It let me know which direction word we are learning.
**Student B:** The rhythm patterns of clapping when we learn directions.
**Student C:** Me too. Clapping helps us to understand the meaning of new vocabularies or phrases.

(Interview with students, 21 September 2016)

Apart from these examples, there are many others illustrating that a rhythm-based teaching approach plays an important role in improving the understandability of Chinese for students, thus making it learnable. The *Week Song* is another nursery rhyme used in teaching Chinese, for which gestures were used instead of clapping while singing the song. All these gestures, or the little dance through fingers, were created according to the rhythmic links with the lyrics. Alliteration was used to connect lyrics to gestures, enhancing students’ comprehension of new vocabularies.

*Mountain* for *Monday* [xīng qī yī], the back of palms are bonded together to form a shape like a mountain; *two* for *Tuesday* [xīng qī èr], raise two fingers as a victory sign; *when* for *Wednesday* [xīng qī sōn], pretend to see a watch on wrist; *thirsty* for *Thursday* [xīng qī sì], raise a hand to throat and pretend to drink; *fly* for *Friday* [xīng qī wǔ], arms wave as if to spread wings; *sad* for *Saturday* [xīng qī liù], pretend to be sad – with one hand wipe away tears; *sun* for *Sunday* [xīng qī tiān], two palms form a round shape looking like the sun. On the basis of these metrical links, students easily understood the English meaning of the Chinese lyrics, “xīng qī yī, xīng qī èr, xīng qī sōn, xīng qī sì, xīng qī wǔ, xīng qī liù, xīng qī tiān”; they enjoyed singing the song with the little finger dance. “How do you say Tuesday in Chinese?” I asked, raising two fingers as a victory sign. “Xīng qī èr”
Students responded immediately as soon as they saw the gestures and the signs.

(Self-reflective journal, 3 August 2016)

Once students’ comprehension of Mandarin has been enhanced, they will apply this knowledge flexibly and subconsciously. Rhythm-based teaching enhances students’ understanding of the learning content, thus increasing the learnability of Chinese.

5.3.2 Reducing the ‘pain/gain’ ratio

When the cost/burden of the pain/gain ratio involved in learning is reduced, the pace of Chinese language learning will be accelerated (Singh et al., 2014). This action research embedded rhythm in Chinese language teaching, reducing the pain/gain ratio in the class-processing stage.

The example of the Number Song below is a terrific combination of music rhythm and speech rhythm. The number N is repeated n times: for example, two is repeated twice, three is repeated three times and eight is repeated eight times. There is an obvious short pause before each new number, and the duration of the pause between repetitions is same. For the numbers six, seven and eight, which are repeated more than five times, the tone of each repetition changes, being lowered and lifted. The last part of the lyrics, “sure” and “shí” are homophones, which allows the students to build new knowledge on old.

The numbers zero to ten are the most elementary knowledge. In order to interest students, I prepared a Number Song for them. They chorused rhythmically, “yī, èr èr, sòn sòn sòn, sì sì sì sì, wǔ wǔ wǔ wǔ wǔ, liù liù liù liù liù, qī qī qī qī qī, bā bā bā bā bā bā, trickle trickle jiǔ, are you sure (shí)”. The students were so enthusiastic that they kept asking, “Miss, can we do it again?” even after two repetitions. The classroom teacher rarely stepped in, but on this occasion readily assented to their suggestion and said, “Well, it’s really interesting. I would like to do again as well.”

(Self-reflective journal, 4 May 2016)
Teacher-researcher: Are rhythm-related activities helpful in learning Chinese? Do you want me to add more activities like these in future classes?

Student A: They are quite helpful, especially the Number Song, making us gain the knowledge of numbers quickly.

Student D: Rhythm-related activities reduce the pain of grasping a new language to some extent.

Student G: Yes, please add more rhythm-related activities. We like them.

(Interview with students, 21 September 2016)

The teacher-researcher intuitively felt that rhythm is beneficial in teaching Chinese language and reducing the pain/gain ratio for students, and this feeling was reinforced through her self-reflective journal and transcripts of interviews with students. The rhythmic melody of the Number Song eased the stress and burden of learning the expression of numbers in Mandarin. With this awareness, the teacher-researcher designed a game for students to play shortly after listening to the Number Song, in order to consolidate the teaching content of the lesson. A numerical face (Figure 11) was created with Arabic numerals under the Chinese pinyin.

![Figure 11. Drawing of a numerical face](image)

After the Number Song, the creation of the numerical face turned out to be a huge success. Students found it easier to mark the correct Chinese pinyin for the corresponding numbers in the face. Classroom teachers also commented that students were less distracted in learning Chinese than they were in other classes.

Teacher-researcher: How is student performance compared to that in other classes?

Classroom teacher A: I have got some children who … I have got one boy in particular who stays focused in Mandarin and is a pain in many other lessons, but he enjoys Mandarin
lessons, so he is very rarely a behavior problem. But he could be painful at many other times, you know, disruptive, calling out, silly, but in Mandarin, he is not. I would say the kids do, most of them, try really hard because they know how important Chinese is to their future.

(Interview with classroom teachers, 21 September 2016)

The classroom teacher described the difference in performance and the huge change in one student with a “behavior problem”, who regarded learning as a pain in many other lessons but enjoyed and stayed focused in Mandarin lessons. This was mainly due to the different teaching approach used and indicates that a rhythm-based teaching method helps to reduce the pain/gain ratio of learning. Singh, Han and Ballantyne (2014) argued that successful learning of Chinese reduces the massive drop-out rate. Rhythm teaching, in providing a rewarding experience, stimulates students’ desire to learn, thus making Chinese more easily learnable.

5.4 The Role of Rhythm in the Post-class Stage

5.4.1 Making it easier to remember and recall

Empirical research has investigated effectiveness in vocabulary acquisition and positive results in memory recall through the use of rhythm. Krumhansl (2000, cited in Engh, 2013) has suggested connections between children’s verse and the acquisition of prosodic rules. Barrett (1990) considered music or song to be an efficient way of memorizing word content, providing the necessary repetition for students to remember the new vocabulary items. Mora (2000, cited in Engh, 2013) asserted that long-term musical memory can be retrieved with ease at a later date for mental rehearsal, memorization or during oral interaction. The teacher-researcher’s experience at the end of year ceremony supports this.

The teacher-researcher presented an award for great achievement in Mandarin to one boy from Year 6, shortly after delivering a speech in English in front of all the school staff, students and parents. Unexpectedly, the student bowed to me and said, “Xiè xiè, zhū lǎo shī [Thank you, Miss Zhu]”. All the parents were obviously surprised at first by this sudden Chinese sentence, but soon took pride in this boy’s strong memory and achievement in Chinese, and burst into louder applause.

(Observation notes, 14 December 2016)
This boy’s case is strong evidence that rhythm helps language learners to remember and recall the knowledge previously learnt. As mentioned in Section 5.2.3, greetings (such as “xiè xiè”) were introduced to students early at the beginning of Term 1, and this student was still able to remember and use them at the ending of Term 4. This was because the Greeting Song had impressed students a lot and they had stored the knowledge in long-term memory. Rhythm and language worked concurrently on later recall of delayed vocabulary, formulaic lexical phrases and extended text recall (Salcedo, 2010, cited in Engh, 2013). Students themselves also gave similar evidence in their interview.

**Teacher-researcher:** When we are learning new words, are you able to remember them the next week?

**Students:** Sometimes we are able to remember the new words the next week, sometimes we mix them up after the long weekend. But those with rhythm or song, we can easily remember them.

(IInterview with students, 21 September 2016)

The students’ answer to this question is consistent with Wray’s and Perkins’s perspective (2000, cited in Engh, 2013) that distinctive intonation, rhythm and stress patterns accompany each formulaic unit when being incorporated into the multiple formulaic lexical phrases found in songs, making it easier for the learner to remember and reproduce. It was a challenge for students to remember the learning content of each lesson since they had Mandarin lessons only once a week. But the use of rhythm and rhyme assists auditory recall, and the multimodal combination of rhythm, melody and rhyme, along with linguistic prosody, appears to lead to greater retention. The capability to remember and recall in the post-class stage makes Chinese more learnable for students.

### 5.4.2 Sustaining students’ learning motivation

The most favorable learning occurs in situations of high motivation (Engh, 2013). A rhythm-based teaching approach helps to sustain students’ learning motivation in the post-class stage. In Section 4.2.1. “Affective engagement”, the case was presented of one girl who, even two months after learning the Happy Birthday Song, still showed a fully-engaged attitude to learning Mandarin, followed instructions immediately, and finished tasks effectively and accurately. The teacher-researcher found that this was not the only such case in this action research. The interview with classroom teachers also illustrates that the majority of students’
Learning motivation has been sustained via rhythm-based teaching.

Teacher-researcher: Do you have any games or activities that highly engage the students that I can use in Chinese class?

Classroom teacher A: There are several games they really enjoy, like the one they love at the moment called “stink”. I write a special number on the dice and that’s a bad number. Then I roll the dice, and they have to add the numbers together and sit down. But if I roll the bad number, they stay standing, they get nothing. So they call it “stink”. I don’t know if they would be able to transfer that into Mandarin, but I remembered that last time, the majority advocated the use of Mandarin in the game to add difficulty.

Classroom teacher B: At the moment I don’t know that some would have the skills to convert it, but it is something that we can aspire to because students are so motivated. The Chinese Number Song is the students’ favorite song. It could be the way the song finishes fast, but that one they definitely engage with. They are more confident with the language. I could say definitely for both Year 6 and Year 5. If you play that song, they would jump. They enjoy the music, the singing, doing things together and chanting together.

(Interview with classroom teachers, 21 September 2016)

As shown in the interview transcript above, the students were so motivated that they had a strong desire to apply Chinese in their after-class activities and games. Even though the two classroom teachers were not sure whether the students had the skill to convert it, students confidently advocated the involvement of Chinese language in the game. Since the students were affected by the Number Song (as mentioned by classroom teacher B), their motivation to learn more Chinese numbers had been aroused and sustained. This is consistent with the following narrative self-reflective journal excerpts.

After learning the Number Song, students are familiar with numbers 0 to 10, and they show great expectation of numbers 11 to 19. A game named Hugging was devised. Students needed to form a circle hands to hands and kept rotating clockwise. The music was on as accompaniment, however, once it stopped, I would announce a number in Chinese. Students were supposed to find a corresponding number of people and hug together. The group that was less or more would be out of game. After several rounds of games, four students ended up the winners. One boy revealed his joy, declaring it was his first time to win in the games. More and more students said that they would play the game again in lunch break.

(Self-reflective journal, 11 May 2016)
Students seem not satisfied with the numbers 0–19; they would like to know the Chinese expression of 10s, hundred and thousand. A game, “I am a mathematician”, was played straightaway after learning numbers by 10s, which let students give examples of two numbers that add up to 30. Furthermore, the game “Ultimate Code” was developed so as to summarize the learning of numbers. I wrote down a number on a piece of paper in advance, within the range of numbers 0–99. According to students’ guessing speculation of the numbers, a new range was developed. The range of numbers would then be narrowed down and the ones who worked out the numbers were the winners. Students were exhilarated by a sense of participation and achievement.

(Self-reflective journal, 18 May 2016)

The two excerpts above both show that students were motivated towards learning new Chinese numbers after being influenced by the Number Song. They developed an interest in continuing these games after class, which actually extended their language learning in their spare time. In the game described in the first excerpt, background music was used as a teaching tool, as it has a positive outcome on students’ language acquisition (Mora, 2000, as cited in Engh, 2013).

Rhythm-based teaching sustains long-term learning motivation, which enables students to learn the Chinese language under the most favorable circumstances. All in all, rhythm plays a considerable role in making Chinese learnable, even in the post-class stage.

5.4.3 Helping to establish a healthier teacher–student relationship

As mentioned in Section 4.2.4. “Teacher behavior and student engagement”, a healthy teacher–student relationship is a critical component of an engaging environment in the classroom, helping students to learn Chinese. A healthy teacher–student relationship is a positive, strong, mutual and equitable relationship (Gurgel, 2015). Rhythm is the common language of the world, through which the teacher-researcher viewed students’ culturally situated understandings and values, cared for students’ experience with humanity and caution, and constructed an environment where students were seen as equal with teachers as contributors to the learning process.

Students were extremely happy and excited to see me present at their outdoor activities, even though I did nothing except cheering for them, “Let’s go, XX, let’s go”. What happened at
the Swimming Carnival feels like it was yesterday, with all the students bubbling with enthusiasm for my attendance. They were pleased that I was watching and paying attention to them beyond the Mandarin lessons. And the photos taken on Swimming Carnival day were used as lead-ins in Chinese class, which came from life situations.

(Observation notes, 11 March 2016)

Three-days camping with lovely students at the end of Term 2 turned out to be an adventure full of surprises and joy. I never imagined that I could be so courageous with the encouragement of students, “Let’s go, Miss Zhu, let’s go”, and managed to do archery, rock climbing, staple climbing, giant swing, flying fox, tree top and so on. Rapport has been built between the teacher-researcher and the students, as we had this experience together. It was natural enough to ask students the colors (red, yellow, blue) of the archery target, the directions (three o’clock) to pull the rope to support the climber for rock climbing, the favorite food (hot chocolate) at the country fair, and they would respond to me accurately in Chinese.

(Observation notes, 29 June 2016)

Figure 12. Rock climbing on camping trip with students

The two excerpts from observation notes both described after-class activities with students, and both linked the teacher-researcher and students with a cheering rhythm, “Let’s go, XX, let’s go”. In the first excerpt, the teacher-researcher cheered for students at their swimming carnival, “Let’s go, XX, let’s go”, and students bubbled with enthusiasm and excitement; in the second excerpt, students encouraged the teacher-researcher during camping, “Let’s go, Miss Zhu, let’s go”, and she became courageous and overcame difficulties. The simple but magical cheering rhythm brought closer the relationship between the teacher-researcher and
the students. Rapport was built between them, as they had the experience together, which made it easier to deliver Mandarin lessons in an engaging climate and consequently increased students’ learning ability.

Rhythm-based teaching helps to establish a healthier teacher–student relationship, even in the post-class stage, which works towards creating a responsive learning environment in the class and therefore increases Chinese language learnability for students.

5.5 Discussion and Conclusion
This chapter, in discussing the before-class stage, the class-processing stage, and the post-class stage, has demonstrated the role rhythm plays in increasing Chinese learnability for students. The three stages work in concert with the three cycles in this action research, and each cycle of implementation corresponds to one school term. The data of the first cycle, mainly collected during Term 1, illustrate that a rhythm-based teaching approach caters for students’ natures and stimulates students’ learning interest in the pre-active teaching stage. The majority of data of the second cycle is collected from Term 2, and verifies that rhythm-based teaching enhances students’ learning comprehension and reduces the “pain/gain” ratio in the class-processing stage. The data of the third cycle, mainly collected during Term 3, demonstrates that rhythm-based teaching makes it easier for language learners to remember and recall, sustains students’ learning motivation and helps to establish a healthier teacher–student relationship in the post-class stage.
Table 8 gives a direct view of the roles of rhythm in the different stages and cycles of implementation.
### Table 8. Roles of rhythm in the different stages

<table>
<thead>
<tr>
<th>Cycle</th>
<th>Term</th>
<th>Stage</th>
<th>Roles of rhythm</th>
</tr>
</thead>
<tbody>
<tr>
<td>cycle1</td>
<td>1</td>
<td>pre-active</td>
<td>catering for students’ natures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>stimulating students’ learning interest</td>
</tr>
<tr>
<td>cycle2</td>
<td>2</td>
<td>class-processing</td>
<td>enhancing students’ comprehensions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>reducing pain/gain ratio</td>
</tr>
<tr>
<td>cycle3</td>
<td>3</td>
<td>post-class</td>
<td>making it easier to remember and recall</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sustaining learning motivation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>helping to establish a healthier teacher–student relationship</td>
</tr>
</tbody>
</table>

Planning, observation, action and reflection, always included in each cycle of implementation and each stage, enabled the teacher-researcher to explore the important role of a rhythm-based teaching approach in language teaching and learning.
Chapter 6 Data Analysis: Practical Ways of Teaching

The aim of this chapter is to answer the third contributory research question: How does a teacher scaffold a rhythm-based teaching approach in practical ways to make Chinese learnable? The term “scaffolding” as a metaphor in the education field is introduced at the beginning of this chapter. Chapter 6 mainly focuses on the practical ways of scaffolding teaching: laying the foundation, engaging students’ prior knowledge, and employing other practical scaffolding assistance. The discussion and conclusion follow. This chapter builds on the review of literature and the action research occurring iteratively and simultaneously.

6.1 Introduction

Rising from the ground and placed around the outside of buildings under construction, scaffolding allows builders access to the emerging structure. The builder removes the scaffolding once the building is capable of standing by itself, which means the builders provide essential but temporary support. In the same way, the teacher provides temporary supporting structures to assist Chinese language learners. Once learners develop mastery of new understandings, new concepts and new abilities, the teacher needs to withdraw this support.

“Scaffolding” is a term that clearly resonates with teachers. Wood, Bruner and Ross (1976, as cited in Hammond, 2001) were the first to use the term as a metaphor in the education field, capturing the nature of support and guidance in learning. Scaffolding has been widely used in recent years. In this study, the teacher-researcher employed a rhythm-based teaching approach as scaffolding, in order to assist students in completing tasks that they could not quite manage on their own.

The first step, “laying the foundation”, refers to knowing more about the students and suiting their learning levels. The second step, “engaging students’ prior knowledge”, highlights the translating of English songs into Chinese, combining Chinese lyrics with a well-known tune, and employing perceptions of English/Chinese similarities. The third step, “employing other practical scaffolding assistance”, includes teaching tones with humor, using pop culture as a reminder device, using clapping to emphasize words, and developing capability as a language teacher-researcher.
6.2 Laying the Foundation for Scaffolding

6.2.1 Knowing more about the students

On the basis of the students’ capabilities and current levels of understanding, scaffolding is designed to extend and develop new skills, concepts or understandings (Hammond, 2001). Therefore, it was necessary for the teacher-researcher to learn about her students in order to lay the foundation for suitable scaffolding.

Frankly, at the beginning, the teacher-researcher took students’ comprehension of English for granted, without being aware that they were still learning their native language as well. This immature idea only changed when the teacher-researcher had a face-to-face meeting with the principal, regarding permission for carrying out the research in Tianyuan primary school.

This research was closely related to students, therefore, the approval of the National Ethics Application Form (NEAF) and State Education Research Application Process (SERAP) was needed. All the documents were well prepared and logically organized, especially the information and consent forms for students, which were written in professional and formal language and in research terms. Unexpectedly, the principal was amazed, not at the flowery language, but at the formal language, which was too formal to be understood even by students who were native English speakers. In order to convince me, he showed me one of the school newsletters that he edited, in which were simple sentences and words. At the end, the principal and I prepared a simplified version before handing it out to students.

(Observation notes, Term 1, 2016)

The above excerpt indicates that the teacher-researcher needed to pay great attention to the English that students were familiar with and design balanced teaching content in Mandarin for them. Primary school students in China organize and speak Chinese differently from high school or university students, mainly because they are at different education stages. The teacher-researcher now realizes the same thing happens with Australian students, who are learning their native language step by step while they are learning Mandarin as a second/foreign language.

To better understand the students in Tianyuan primary school, observations were made both in and out of classes – in Mandarin class and classes in other subjects as well. There were drama classes for Year 5 and Year 6 students every Wednesday afternoon in Term 1. These
were a totally new experience for them, just as Mandarin classes were. It was a brilliant chance to observe how other teachers led students into a completely new world on the basis of the students’ current learning levels. After all, life never stops teaching me, and my teaching never stops learning.

The hall in the school is set up and used as a drama classroom. The drama teacher is an Aboriginal artist who delivers lessons at several schools. The introduction or the theoretical part is much shorter than I expected. She asked for students’ opinions regarding the comprehension of drama, and successfully built a relationship between drama and performance.

(Observation notes, Term 1, 2016)

The drama teacher pretended to be a photographer and that the stage in the hall was a big camera lens. Students were divided into two groups. Students in group A were required to pretend they were at a beach, while students in group B needed to guess what performers were doing, exactly, from their body language. At the beginning, all the performers were supposed to use only one static gesture, which was a big challenge for both performers and audience. Some of the performances were easily recognized as surfing, swimming, lying on the beach enjoying sunshine and playing with sand to build a castle, but some performances were a bit confusing. Then as soon as “the photographer” gave the instruction “one, two, three, play”, the picture in the huge camera lens became dynamic. Performers started moving to make their still gestures more clearly defined.

(Observation notes, Term 1, 2016)

The next section was the performance by students in group B. All the routines were the same, only the site was transferred from a beach to a gym. After performance practice, the drama teacher indicated the parts that could be improved. For example, it could be better to bend the legs at natural angles than stretch legs forward straight if you were sitting down to drink water at the gym. Students all nodded to show their agreement. I was amazed at how quickly they caught on and how engrossed they were in the performance.

(Observation notes, Term 1, 2016)

The first excerpt mentions that the theoretical part of the lesson was shorter than the teacher-researcher expected, which actually catered for students’ developmental characteristics in stage three (Year 5 and Year 6). After all, they were too young to be treated in the way that university students would be. They were not mature enough to understand abstract theoretical
concepts nor the long history and development of drama. Doing practical activities suited them better than rules or principles. The second and third excerpts describe how the drama teacher carried out her teaching, linking it to the students’ daily lives. “Drama” may have been a strange word to them, but “beach” and “gym” were not. The teacher started with the things students were familiar with, encouraged them to exploit potentialities from static gestures to dynamic performance, and finally stimulated them to improve their performance through collaborative evaluation. That is the way it worked for learners who have not received regular professional training in drama before and I thought it would also apply to learning Mandarin.

It is important to get to know students, including their characteristics, learning habits, topics of interest, English comprehension, learning abilities, and so on. Only in this way can the teacher-researcher find a starting point for teaching, and then explore the most suitable way to accord with learners’ level of understanding.

6.2.2 Suiting students’ learning level

The teacher-researcher often asked herself the question: Are the teaching content planned or the games designed too complicated for students? Various combinations of high and low teacher support and challenge will result in varied classroom consequences (Mariani, 1997, cited in Hammond, 2001), as shown in Figure 13, below. In the learning context where there is low challenge and low support, students are unlikely to be motivated and may perhaps express boredom through misbehavior, with little learning occurring. With high challenge and low support, students experience frustration, insecurity and anxiety, since such contexts are beyond their capabilities and are likely to result in failure. Low challenge and high support makes students comfortable; however, they may not learn a great deal. It is when the learning context presents both high challenge and high support that the most favorable learning takes place.
The teacher-researcher had not realized the importance and necessity of preparing the whole term’s lesson plan, until she started teaching Mandarin at Tianyuan primary school at the end of Term 4, 2015. The content of lessons was not sequenced well enough to achieve the aim of continually reinforcing old knowledge and building up new knowledge. The teacher-researcher was reminded to think about the possibility of combining what was learned in class with what was happening around the students in their daily lives. Coincidently, Term 1 of 2016 started in February while the Chinese were busy celebrating their New Year. It was a good chance to bring in some Chinese culture and related language knowledge. Therefore, the lesson plan for Term 1, 2016 was made in advance, and was amended according to the feedback from classroom teachers, the response from students or the required changes as identified by the teacher-researcher. Following is an example of the original (
Table 9) and the revised version (Table 10) of the whole term’s lesson sequence. The lunar calendar was introduced first, followed by the Spring Festival (origin, spring couplets, writing brush, lucky money in red envelopes and the character “chūn”, as well as paper-cutting) and the Lantern Festival (origin, traditional Chinese food, “yuán xiāo”, and DIY lanterns). The sequence ended with a section of the Chinese song “Xīn Nián Hǎo [Happy New Year]”. The content was sequenced so that students were able to grasp it more easily.
<table>
<thead>
<tr>
<th>Week 2</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. getting to know me</td>
<td>1. getting to know me</td>
<td></td>
</tr>
<tr>
<td>2. expectations (term plan)</td>
<td>2. expectations (term plan)</td>
<td></td>
</tr>
<tr>
<td>3. class routine (English one)</td>
<td>3. class routine (Chinese one)</td>
<td></td>
</tr>
<tr>
<td>4. make up name cards</td>
<td>4. make up name cards</td>
<td></td>
</tr>
<tr>
<td>Week 3</td>
<td>1. the location of China and draw the map of China</td>
<td>1. draw the map of China</td>
</tr>
<tr>
<td></td>
<td>2. learn “zhōng guó” and draw the flag of China</td>
<td>2. Chinese New Year (Spring Festival) activities and customs (the origin/the story about “nian”, fireworks, lucky money, CCTV Spring Festival Gala)</td>
</tr>
<tr>
<td></td>
<td>3. Chinese New Year (Spring Festival) activities and customs (lunar calendar, the origin/the story about “nian”, fireworks, pasting couplets, lucky money, CCTV Spring Festival Gala)</td>
<td>3. from pasting couplets to a brief introduction of the Chinese writing brush and calligraphy</td>
</tr>
<tr>
<td>Week 5</td>
<td>1. Lantern Festival activities and customs</td>
<td>1. Lantern Festival activities and customs</td>
</tr>
<tr>
<td></td>
<td>2. lantern handcraft</td>
<td>2. lantern handcraft</td>
</tr>
<tr>
<td></td>
<td>basic knowledge about pinyin</td>
<td>learn a piece of Chinese song &lt;新年好&gt; I</td>
</tr>
<tr>
<td></td>
<td>1. speaking/listening system vs writing/reading system,</td>
<td>1. listen to the English version of Happy new year to get familiar with the rhythm</td>
</tr>
<tr>
<td></td>
<td>2. tone 4+1 recognizing and listening practice</td>
<td>2. learn the verb in the lyrics: chàng gē, tiao wǔ (introduction of Chinese popular TV show I am a singer)</td>
</tr>
<tr>
<td></td>
<td>3. differences and difficulties, such as ū、e、q、he</td>
<td></td>
</tr>
<tr>
<td>Week 6</td>
<td>1. greetings</td>
<td>learn a piece of Chinese song &lt;新年好&gt; II</td>
</tr>
<tr>
<td></td>
<td>2. Q+A greetings</td>
<td>1. learn to pronoun the lyrics: 们，我们，你们，老师们，大家</td>
</tr>
<tr>
<td></td>
<td>3. class routine(Chinese one)</td>
<td>2. learn the sentence structure “祝贺 sb sth”</td>
</tr>
<tr>
<td></td>
<td>4. games</td>
<td></td>
</tr>
<tr>
<td>Week 7</td>
<td>1. simple self-introduction “我叫_____”</td>
<td>Color I</td>
</tr>
<tr>
<td></td>
<td>2. Q: 你好。你叫什么名字? What’s your name?</td>
<td>1. red and yellow (the significance to Chinese, draw the flag of China)</td>
</tr>
<tr>
<td></td>
<td>A: 我叫 XX. I am called XX.</td>
<td>2. white and black</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. compare red and white (cultural diversity )</td>
</tr>
<tr>
<td>Week 8</td>
<td>1. numbers 0–10</td>
<td>Color II</td>
</tr>
<tr>
<td>Week 9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 9. The original version of the whole term lesson plan**
Table 10. The revised version of the whole term lesson plan

<table>
<thead>
<tr>
<th>Week</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 2</td>
<td>1. getting to know me</td>
<td>1. getting to know me</td>
</tr>
<tr>
<td></td>
<td>2. expectations and term plan</td>
<td>2. expectations and term plan</td>
</tr>
<tr>
<td></td>
<td>3. class routine (English one)</td>
<td>3. class routine (Chinese one)</td>
</tr>
<tr>
<td></td>
<td>4. make up name cards</td>
<td>4. make up name cards</td>
</tr>
<tr>
<td>Week 3</td>
<td>basic introductions about China</td>
<td>basic introductions about China</td>
</tr>
<tr>
<td></td>
<td>1. learn zhōng guó (China), zhōng wén (Mandarin), zhōng guó rén (Chinese)</td>
<td>1. learn zhōng guó (China), zhōng wén (Mandarin), zhōng guó rén (Chinese)</td>
</tr>
<tr>
<td></td>
<td>2. the map of China and location in the world</td>
<td>2. the map of China and location in the world</td>
</tr>
<tr>
<td></td>
<td>4. coloring national flag</td>
<td>4. coloring national flag</td>
</tr>
<tr>
<td>Week 5</td>
<td>1. Chinese New Year and lunar calendar</td>
<td>1. Chinese character “chun” (春)</td>
</tr>
<tr>
<td></td>
<td>2. Spring festival, origin and customs</td>
<td>2. traditional Chinese art form: paper-cutting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. handcraft: paper-cutting of character 春</td>
</tr>
<tr>
<td>Week 6</td>
<td>1. Chinese character “chun” (春)</td>
<td>Lantern Festival</td>
</tr>
<tr>
<td></td>
<td>2. traditional Chinese art form: paper-cutting</td>
<td>1. origin</td>
</tr>
<tr>
<td></td>
<td>3. handcraft: paper-cutting of character 春</td>
<td>2. one traditional Chinese food: yuán xiāo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. handcraft: making lanterns</td>
</tr>
<tr>
<td>Week 7</td>
<td>Lantern Festival</td>
<td>Mid-term review</td>
</tr>
<tr>
<td></td>
<td>1. origin</td>
<td>1. quiz: matching activity</td>
</tr>
<tr>
<td></td>
<td>2. one traditional Chinese food: yuán xiāo</td>
<td>2. game: top vs top (competitions between two large groups)</td>
</tr>
<tr>
<td>Week 8</td>
<td>1. basic knowledge about pinyin</td>
<td>1. awards ceremony for winners in the competition</td>
</tr>
<tr>
<td></td>
<td>2. four basic tones +1 special tone (toneless)</td>
<td></td>
</tr>
</tbody>
</table>
Comparing the revised version to the original one, it is easy to see that the majority of the proposed teaching content has been kept, while some big changes have been made to the content for the second half of the term. The traditional festival of China, the Spring Festival, was illustrated in a thorough way, including the character “chūn” and paper-cutting. Thus the two weeks of lessons on this topic were extended to three weeks, for better time control and management in the class. Mid-term review was added to the list of teaching tasks. Two pieces of song, *Happy Birthday* and *Jasmine Flower*, were introduced to students in appropriate situations, which presented more opportunities for the teacher-researcher to explore her rhythm-based teaching approach. Knowledge about color and number would be explained at the beginning of Term 2. Since this was an action research project, the design of the teaching content always involved the cycles of planning, acting, developing and reflecting. Teaching and learning is a mutual operation, and the teacher-researcher encountered many unexpected situations in the classes, which have greatly inspired her.

<table>
<thead>
<tr>
<th>Week 9</th>
<th>Week 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. pinyin marking rules and exercises</td>
<td>1. pinyin marking rules and exercises</td>
</tr>
<tr>
<td>2. greetings Part I</td>
<td>2. greetings Part II</td>
</tr>
<tr>
<td>3. class routine (Chinese one)</td>
<td>2. the whole term review</td>
</tr>
<tr>
<td>2. Chinese birthday song <em>&lt;shēng rì gē&gt;</em> (happens to be one student’s birthday)</td>
<td>1. &lt;xīn nián hǎo&gt; part II</td>
</tr>
<tr>
<td>3. pronouns in Chinese</td>
<td>2. the whole term review</td>
</tr>
</tbody>
</table>

Chinese New Year is said to originate from the story of Nian. A monster comes to the village every New Year’s Eve but is afraid of fire, fire crackers and red colors. Although junior students watched a cuter version, they were not capable of answering questions which senior students could answer. It was really disappointing when nothing changed, even after watching three times. After class, I discussed with the classroom teacher the issue of how to make little kids more engaged. She suggested that I prepare a work sheet for them to color the Nian monster, which would facilitate their comprehension and strengthen their impression. To tell the truth, 30 minutes was too long for little kids to sit on the floor and concentrate on the teacher.

(Self-reflective journal, Term 1, 2016)

A video about a westerner presenting the Chinese Lantern Festival was introduced to students.
in class. A two-minute sidelight was deliberately retained to cheer up the students, pertaining to the presenter’s pre-preparation and rehearsals. Students laughed a lot at this interesting part. Frankly, I wasn’t conscious of the appearance of one improper word in the sidelight, while the classroom teacher was, and even regarded it as a bit rude. Shortly after the class, the classroom teacher passed this on to the main supervising teacher and the principal, who had a serious conversation with me right away. I felt embarrassed regarding the inherent meaning of that improper word and apologized to the teachers in Tianyuan primary school immediately. The sidelight was cut off when the video was used again in another class.

(Self-reflective journal, Term 1, 2016)

The above two journal excerpts highlight the importance of designing suitable teaching content and scaffolding new knowledge in a proper way. Conversations with the classroom teacher always reminded the teacher-researcher of the indispensable role of activities. Young children cannot concentrate for more than an allocation of 15 minutes of introduction and 15 minutes of activities. The teacher-researcher realized the necessity of carrying out activities among senior students (Year 5 and Year 6) as well. Therefore, activities involving wontons, paper-cutting and lanterns were conducted in the class, which were not in the original lesson plan. These activities aroused huge interest in students, so that they had much more to look forward to in the Mandarin class than before. What the teacher-researcher absorbed from the situation related in excerpt two was that an educator should not assume students’ readiness for certain teaching content; even the selection of a video, should cater to students’ actual level of maturity. Otherwise, what is thought suitable might turn out to be offensive. (The teacher-researcher also learned that it is always useful to check video excerpts with the classroom teachers.)

Apart from the observation notes, self-reflective journals and lesson plans mentioned above, evidence collected from the interview with classroom teachers also showed that a rhythm-based teaching approach suited to students’ learning levels makes it easier for the teacher-researcher to lay the foundation for scaffolding, and helps make Chinese learnable.

**Teacher-researcher:** Can you yourself understand the teaching content of my lessons? Are they suitable to students’ learning abilities?

**Classroom Teacher A:** Yes, they suit students’ learning abilities. I try to stay with you, with the lessons. I don’t have the skills that kids have so I may be saying stuff, and I am muddily trying to remember it, but I am not as good as the kids are, they are much quicker
than I am in picking things up.

Classroom Teacher B: Yes, I can understand the teaching content when you are teaching. As I mentioned to you before, you just need to increase your volume, and you have done that, which is better. Yes, they are suitable to students’ learning abilities.

(Interview with classroom teachers, 21 September 2016)

Both the classroom teachers of Year 5 and Year 6 at Tianyuan primary school agreed that the teaching content of the teacher-researcher’s lessons suited students’ current learning abilities. They themselves, without any background in Chinese, were able to understand as well. As already mentioned, it is when the learning context presents both high challenge and high support that the most favorable learning takes place. Teaching content ought to be designed to suit students with beginner level Mandarin, and gradually build on that with the corresponding scaffolding. A rhythm-based teaching approach provides a suitable temporary support and helps students in the process of learning Chinese, which will be further illustrated in the following sections.

6.3 Engaging Students’ Prior Knowledge

6.3.1 Transferring English songs to Chinese

Scaffolding is structured in a way that enables students to extend their existing levels of understanding (Hammond, 2001). Engaging students’ prior knowledge, for instance by transferring English songs to Chinese, adds fuel to fire the learning process, and shapes the knowledge that learners create, discover and attain. The students in this study were extremely familiar with nursery rhymes in English and the Chinese version was therefore easily accepted by them with the same rhythmic patterns. The teacher-researcher adapted Happy Birthday, Happy New Year, Head, Shoulders, Knees and Toes, and Ten Little Indians as specific examples, introducing a rhythm-based teaching approach to make Chinese learnable for students.

The adaptation of Happy Birthday was a huge success, which is illustrated thoroughly in Section 4.2.1. “Affective engagement”. Embodying Chinese lyrics in the same rhythm enabled students to expand their Mandarin vocabularies in an easier way. The Chinese version of Happy New Year works in a similar way.
After teaching students “Zhù nǐ shèng rì kuài lè [Happy birthday to you]”, an idea occurred to me: why not incidentally mention “Zhù nǐ xīn nián kuài lè [Happy new year to you]” with the same rhythm. The latter song has the same sentence structure as the former one. Moreover, the central topic of Term 1 is Chinese New Year, so it would be a great idea to bring in the expression of “Happy New Year” as well as the Chinese version of the Happy New Year song. “Who would like to have a go?” After two minutes’ learning of the song, I put forward the question. Many students put their hands up and couldn’t help calling out, “Miss, please”.

(Self-reflective journal, Term 1, 2016)

Figure 14. Screenshot of teaching Happy New Year

Students’ interests arose from the similarities between the songs and consistency of the teaching content. Their certainty about what to do increased their confidence in learning Chinese and encouraged their participation in the task. They had prior knowledge of the rhythm of Happy New Year, therefore it was much easier to scaffold the new knowledge. With the permission of the classroom teacher and the student himself, a recording was made of one confident boy’s singing of Happy New Year. This recording was used to set a good example to other classes and achieved an admirable effect. Head, Shoulders, Knees and Toes is another example of combining Chinese lyrics and English rhythm.

I let students listen to the English version of Head, Shoulders, Knees and Toes at first, and led them in the actions while singing: touch head when we sing “head”, touch shoulders when we sing “shoulders”, touch knees when we sing “knees”, touch “toes” when we sing “toes” and the same for “eyes, ears, mouth, and nose”. Straight after, I showed them a video about the Chinese version of this song, in which all the body parts appeared in the same order as in the
English one. Then I played the Chinese version a second time and asked them to do the same actions. It allowed students to seize on how to say the corresponding body parts in Mandarin quickly and easily. “Tóu, jiǎn bōng, xī gōi, jiǎo zhī, xī gōi, jiǎo zhī. Yǎn jīng, ěr duō, zú ba, bí zǐ. Tóu, jiǎn bōng, xī gōi, jiǎo zhī, xī gōi, jiǎo zhī. [Head, shoulders, knees and toes, knees and toes. And eyes, ears, mouth, and nose. Head, shoulders, knees and toes, knees and toes].” We practiced this several times, and the students turned out to be quick learners and demonstrated their capabilities in completing a matching activity and a “Who is the spy (finding the location of Chinese vocabulary in a puzzle)” activity. And their singing of this Chinese song was just beautiful and impressive.

(Self-reflective journal, Term 2, 2016)

In both the English and the Chinese versions, the lyrics of the corresponding body parts appeared in the same order, which allowed students to repeat the exact same actions while singing, and therefore made it easier for them to get to know the new words. A rhythm-based teaching approach took advantage of the students’ prior knowledge of nursery rhyme rhythm, and thus enabled them to learn the Chinese vocabulary. The following is a detailed lesson plan for teaching the Chinese version of Ten Little Indians, which illustrates the teaching process step by step.

Time: 45 mins
Class: Year 5

Teaching aim: Let students comprehend and master the Chinese nursery rhyme <十个印第安小朋友>

Teaching difficulties: The usage of “个(gè)”
Teaching assistance: PowerPoint, smart board
Teaching process:

Step 1: Warming up (5 mins)
1) Play the video of the English version of Ten Little Indians; let students listen to and familiarize themselves with the rhythm.
2) Play the song a second time and let them sing along with it.

(Explanatory: Some students have already learned this English song in pre-school, while the majority have not. Here is the link from YouTube, which provides the “sing along” part: https://www.youtube.com/watch?v=tnIotW20r0

Step 2: Introduction of knowledge (25 mins)
1) Listen to the Chinese version of the song. Here is the link:
2) Hand out lyrics papers and explain the lyrics. Below are the lyrics; the words in black are repeated four times, while the red parts change every single line.

```
yī gè, èr gè, sān gè xiǎo péng yǒu,
sì gè, wǔ gè, liù gè xiǎo péng yǒu,
qī gè, bā gè, jiǔ gè xiǎo péng yǒu,
shí gè yīn dì ān xiǎo péng yǒu.
```

3) Revise numbers 0–10 so that students will confirm that the red words are the numbers they have already learned. Here is the link to the number song that the children enjoy:

https://www.youtube.com/watch?v=2eLP3FuuEVs&list=PLiVDMVXQVhRnRGQU-AUrlbWmfB8VTv5H

4) Revise “péngyǒu” and introduce “xiǎo” and “xiǎo péngyǒu”. Below are some screenshots of the PowerPoint presentation.

5) Ask students how to say “one friend” in Chinese and then lead into the introduction of “个 (gè)”. Below are some screenshots of the PowerPoint presentation.

6) The whole class listens to the Chinese song again and sings along with it.

(Explanatory: Knowledge is built up gradually. Before the delivery of this lesson on the song, I have already taught them the basic numbers and words such as “tóng xué (同学)”, “péng yǒu (朋友)”, “xué shēng (学生)”, so they will still feel safe when stepping into the words of this Chinese nursery rhyme.)

Step 3: Consolidation (10 mins)

1) The whole class sings the Chinese song <十个印第安小朋友> without the accompaniment of the video.
2) All the girls sing the song and then all the boys.
3) Invite two volunteer students to sing the song in front of the class.
4) Invite individuals to sing the song.
(Exploratory: Repetition is an important habit in learning language. Positive assessments, such as a round of applause, “你好” gesture and “你真棒” gesture shall be properly used as encouragement.)

Step 4: Summary and homework (5 mins)
1) Let the whole class sing along with the video once again.
2) Ask the children to take the lyrics paper home and sing the song to parents.
(Exploratory: This could be a great success in extending the new knowledge to their daily lives.)

(Lesson Plan, Term 2, 2016)

Based on the English rhythm and Chinese numbers students had already learnt, the Chinese version of *Ten Little Indians* was not difficult to learn. Transferring English songs to Chinese helped students to learn Chinese effectively and efficiently. Singing is renowned for its ability to cast a spell over students with lyrics, melody and rhythm. Students were energized by the music and muttered vocabularies as well as sentences structures.

6.3.2 Combining Chinese lyrics with a well-known tune

Engaging students’ prior knowledge included combining Chinese lyrics with a well-known tune, with the aim of providing scaffolding as a temporary support for learning Chinese. Rhythm patterns introduced the new Chinese information well to students. Fitting a well-known tune to Chinese lyrics produced great results. The teacher-researcher once taught students how to ask about somebody’s birthday using the tune of the familiar song *You Are My Sunshine*.

“You are my sunshine, my only sunshine” has the same number of syllables as “Nǐ de shēng rì shí shēn měi shí hòu [when is your birthday]”. I discovered this by chance, then thought why not put these two things together. I let students set the tune to this single sentence of lyrics; some parts were sung solo by girls, some parts were sung solo by boys, and some were sung as a chorus. It was difficult for them to remember this sentence at first, but things changed a lot after setting it to the tune. And a girl came to me after class saying, “Miss, I love this idea so much. I love this song so much”. When we had the Mandarin lesson the next week, I could still hear them singing the song by themselves: “Nǐ de shēng rì shí shēn měi shí hòu”.

(Self-reflective journal, Term 2, 2016)
You Are My Sunshine is popular among English-background children. It was a novel idea to attempt to employ this famous tune in the Chinese class. Students were naturally attracted by the familiar tune, and tended to keep the Chinese expression, “Nǐ de shēng rì shì shén měi shí hòu [when is your birthday]” in mind without extra effort. Combining Chinese lyrics with a well-known tune increased non-Chinese background Australian students’ comprehension and enabled them to learn Chinese easily. Apart from using well-known tunes, teaching Chinese using rap also makes learning unusually interesting.

The numbers zero to ten is elementary knowledge. In order to catch the attention of students, I prepared a Number Song for them. They chorused rhythmically, “yī, èr, sān sān sān, sì sì sì, wǔ wǔ wǔ wǔ wǔ, liù liù liù liù liù liù, qī qī qī qī qī qī qī, bā bā bā bā bā bā bā bā bā bā, trickle trickle jiǔ, are you sure (shí)” The students were so enthusiastic that they kept asking, “Miss, can we do it again?” even after two repetitions. The classroom teacher rarely stepped in, but on this occasion readily assented to their suggestion and said, “Well, it’s really interesting. I would like to do again as well.”

(Self-reflective journal, Term 2, 2016)

I taught the students how to ask someone their age and how to answer this question, which brought the numbers 11 to 19 into use. The conversation started with student A’s question, “nǐ jǐ suǐ?” followed by student B’s answering, “wǒ ______ suǐ. nǐ nè?” Student A then responded “wǒ ______ suǐ”. They were supposed to fill in the gap with their ages. I walked around the classroom while students were practicing this with their peers, and noticed that they seemed proud if I stopped to listen to their conversation. Some even came to me and requested the chance to be the first group of volunteers to present their conversation in front of the whole class. “Miss, we have practiced several times, could we be the first ones to have a go, please?”

(Self-reflective journal, Term 2, 2016)

The influence of saying Chinese numbers in a rap way is long lasting. The first excerpt above was introduced in Section 5.3.2. “Reducing the pain/gain ratio”. It is mentioned here again to demonstrate that the rap setting helped students to remember and recall the first 10 basic Chinese numbers easily. Therefore, when they came to the double-digit numbers, 11 to 19, they were able to keep these in mind as well, as is shown in the second excerpt above. Students were so confident about numbers that they wanted to show their oral skill in front of the teacher-researcher and the whole class.
The teacher-researcher also involved hip-hop style tunes in teaching Chinese, using hand clapping instead of electronic backing. Several examples related to hip-hop style will be introduced in Section 6.4.3. “Using clapping to emphasize words”. Setting Chinese lyrics to well-known tunes helped students enter into a strange Chinese world but still feel safe there. Rhythm shortens the distance between Chinese and its learners.

6.3.3 Employing perceptions of English/Chinese similarities
In view of the target language and the target group of students, great attention was paid to the differences and similarities between English as a stress-timed language and Mandarin as a syllable-timed language. Pike (1945, as cited in Lahoz, 2012) contributed to rhythm typology and coined the terms “stress-timed language” and “syllable-timed language”. So-called stress-timed languages, such as English, attempt to balance stressed syllables at comparatively regular intervals. In syllable-timed languages, a similar period of time is devoted to pronouncing each syllable of an utterance. Mandarin belongs to this rhythm class. However different they may be, English and Mandarin do share some things in common, especially in phonetics. The two languages have some words which are similar in pronunciation, and they have borrowed and incorporated many words (loan words) from each other, as shown in Table 11. These similarities can allow new connections to be made from existing knowledge, by reminding students of a shared experience, thus enabling students to develop their comprehension and understanding in learning Mandarin.

Table 11. Phonetic similarity between Chinese and English

<table>
<thead>
<tr>
<th>Types of similarity</th>
<th>English words</th>
<th>Chinese words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similar pronunciation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wall</td>
<td>wǒ [I]</td>
<td></td>
</tr>
<tr>
<td>knee</td>
<td>nǐ [you]</td>
<td></td>
</tr>
<tr>
<td>eye</td>
<td>ài [love]</td>
<td></td>
</tr>
<tr>
<td>toe</td>
<td>tóu [head]</td>
<td></td>
</tr>
<tr>
<td>two</td>
<td>tù [rabbit]</td>
<td></td>
</tr>
<tr>
<td>Chinese words borrowed from English</td>
<td></td>
<td></td>
</tr>
<tr>
<td>chocolate</td>
<td>qīduō kè lì</td>
<td></td>
</tr>
<tr>
<td>sandwich</td>
<td>sōn míng zhī</td>
<td></td>
</tr>
<tr>
<td>coffee</td>
<td>kō fēi</td>
<td></td>
</tr>
</tbody>
</table>
There are also many other examples, such as: “lychee” from “lì zhī”, “bok choy” from “bái cài”, and “hoisin” from “hōi xǐōn”. These three types of similarity enabled the teacher-researcher to start from the students present level, then push them to levels of achievement that would have been beyond them without this support. Underpinning students’ previous learning experience thus improves Chinese learnability for them.

Hammond (2001) suggests that opportunities will arise for teachers to provide scaffolding to take students along a particular path in their thinking, which helps them establish key ideas or concepts. The teacher-researcher also took this opportunity to improve students’ competence. She asked students to search for more similarities between English and Chinese in the aspect of speech rhythm, as in phonetics. The examples listed in the class were like scaffolding, and the task after the class was like the process of withdrawing the scaffolding, which enables students eventually to complete such work on their own.

6.4 Employing Other Practical Scaffolding Assistance

6.4.1 Teaching tones with humor
Along with laying the foundation and engaging students’ prior knowledge, there are other kinds of practical scaffolding assistance which can be employed to make Chinese learnable via a rhythm-based teaching approach. Teaching Chinese tones with humor is one such method. Chinese is a tonal language as well as a syllable-timed language, with four basic tones and a special toneless tone. Pinyin, the Romanization system representing the sound of
Chinese words, is used in the speaking and listening system of Chinese and is always regarded as the most challenging part to learn. With the aim of increasing the learnability of Mandarin, the teacher-researcher made detailed lesson plans, taught tones carefully, developed teaching content and strategies according to the response of students in the class and also weighed up the pros and cons of these strategies in her reflective journals.

Time: 45 minutes
Class: Year 5
Teaching Aims: Teaching tones to students
Teaching Keys:
1. 4 basic tones and 1 special tone
2. Tones marking rules
Teaching Difficulties: To differentiate tones
Teaching Assistance: PowerPoint, smart board, computer, work sheets
Teaching Process
Step 1: Warming up (5 minutes)
1) Cite several examples of Chinese pinyin and put the question: “What’s the function of those marks above pinyin?”
2) Similarity to phonetic symbols in English, such as [tʃ], [dʒ], [ɪ:], [ʌ]
(Explanatory: Students are curious about these marks above letters all the time, which they never encounter in English. This question will be a good lead-in to attract students’ attention to the following teaching content.)

Step 2: Introduction of new informationknowledge (25 minutes)
1) Introduce the four basic tones and their marks, with the help of body language and diagram to better illustrate the subtle differences of pitch and timing between the four tones.
2) Introduce the fifth tone, the toneless tone. And hand out a work sheet regarding the tone listening activity.

3) Introduce the six vowels in Chinese pinyin, and let students find the one that is unique to Chinese.
4) Introduce tone marking rules one by one and list four examples of each, followed by a tone marking exercise. Let students write it in their Mandarin notebook and invite four volunteers to share their answers.

(Explanatory: Each step of the introduction is in sequence. The new knowledge is based on the full understanding of old knowledge. The quizzes are intended to exercise important concepts or techniques immediately after they are introduced.)

Step 3: Consolidation (7 minutes)

1) Hand out the work sheet for the tone marking activity. Let the students all start at the same time and have a competition. The one who finishes first with everything correct will receive a gift.
2) Let the winner write down his/her answers on the whiteboard so that the rest of the class can check their answers against them. Analyze incorrect pinyin together with students and inspire them to correct mistakes.

(Explanatory: Competition invokes the students’ strong desire to win. Their enthusiasm will be heightened. Meanwhile, the new knowledge will be consolidated since they will try to do the exercise perfectly.)

Step 4: Summary (3 minutes)

1) Read the six vowels with the five tones together.

(Explanatory: Repetition and a clear conclusion to the lesson is good for memorizing.)

(Lesson plan, Term 1, 2016)

This lesson plan has been revised several times, following discussion and negotiation with supervising teachers in Tianyuan primary school, as well as with supervisors at the university, especially with regard to teaching language in a manner to better attract students. For the purpose of illuminating the function of tones, the teacher-researcher took “ma” as an example. Words with the same spelling but with different tones will result in diverse meanings. Mō (first tone) stands for “mother”, má (second tone) means “flax”, mā (third tone) signifies “horse”, while mà (fourth tone) represents “scold” (as is shown in the tone listening activity in the lesson plan). When the teacher-researcher introduced this material in the class, she made a humorous remark: “So pay attention to tones if you don’t want to call your mum a horse”. All the students burst into laughter and became all the more serious about tones. Humor made learning Chinese pinyin interesting and entertaining, which enhanced students’ comprehension and enabled them to learn the Chinese language.
After introducing basic knowledge of pinyin to students, I was pleasantly surprised by their new familiarity with it. They got used to writing down tone marks as well as pinyin when they learned new Chinese vocabulary, which was totally different from what they were used to doing. They would hardly ever omit the tone marks once they realized the importance of those little signs.

(Self-reflective journal, Term 1, 2016)

I found some students raised their hands more frequently than before, either answering my questions correctly, or putting forward questions related to the tones of pinyin. They were just like dark horses appearing in the competition. One boy behaved himself extraordinarily well in the Mandarin class, so that he was awarded the weekly star. Signed both by me and the principal, a certificate of achievement was presented to him at the Friday assembly in front of the whole school. His classroom teacher even half-jokingly requested that he be the tour guide if they had a chance to go to China.

(Self-reflective journal, Term 1, 2016)

Students were raring to work on the sheet once they heard my instruction to begin. They came to me and kept asking urgently, “Miss, am I right? Do you like mine?” If someone was judged as the first one to finish the exercise 100% accurately, he or she would feel it a great honor to write down his/her answer on the whiteboard. Peer learning is a terrific way to teach tones.

(Self-reflective journal, Term 1, 2016)

Teaching tones is a necessary part of speech rhythm-based strategies for teaching Mandarin. The above three excerpts describe students’ learning attitudes after realizing a joke could be easily made if they ignored tones in Chinese. The first excerpt clarified the fact that teaching/learning through humor can yield twice the result with half the effort. “If you don’t want to call your mum a horse, please pay special attention to tones.” The teacher-researcher made flexible use of this remark in different classes and achieved the expected effect. Students were keen to raise their hands to ask questions related to pinyin and tones, wishing to better understand this new Chinese. The second excerpt vividly reflects this kind of psychology. The participation of the classroom teacher also led the class into a more effective learning atmosphere. Students, including the boy awarded the certificate, obtained a sense of achievement once they gained a better understanding of the listening and speaking system of Chinese through learning tones and their marking rules. The third excerpt proves peer
learning can produce commendable results. Students enjoyed competition against each other and could sometimes learn more by observing their peers than from the teacher.

Tone is to Chinese what stress is to English. English-speakers naturally know on which syllable of the word the stress falls. Chinese speakers naturally know which tone to use for a specific word. On the basis of students’ prior knowledge about stress in English, the idea of tones in Chinese could be broached with humor via a rhythm-based teaching approach. Once students’ comprehension of new ideas and concepts had improved, their language learning could be developed. Doubts and confusion about tones and marks in Chinese pinyin all disappeared, and they regarded tones as contributing significantly to the meaning of words.

6.4.2 Using clapping to emphasize words
As mentioned in Section 6.3.2. “Combining Chinese lyrics with a well-known tune”, apart from rap, the teacher-researcher also used hip-hop style tunes in teaching Chinese. She discovered it was an effective and exciting way to time the beat and say Mandarin out loud. Adults and children tend to clap their hands and stamp their feet unconsciously to a musical beat. The following are two vivid examples of using hand clapping as scaffolding assistance in teaching Mandarin, making language learning more interesting and enabling students to learn Chinese.

I thought a lot about how to teach students the long sentence, “Nǐ de míng zì shì shén me [What is your name]?” They were at the beginner level and knew only a few double syllable phrases. Would they be scared when they encountered such a long sentence the first time? Especially since this sentence is an information question with “what”, and contains the full structure of subject and predicate. Then an idea suddenly jumped into my mind: why not clap out a regular rhythm while we say the sentence? In other words, clap seven times while we say these seven words. So, in the Year 5 class we clapped our hands with the beat, and students were never bored with it. After that, I came up to a student without warning and asked the question, and he unexpectedly answered the question, “Wǒ dē míng zì shì XX [My name is XX]”. Then students clapped their hands again and excitedly waited to be chosen next.

(Self-reflective journal, Term 1, 2016)

“Hóng se, XX, huáng se, XX, bái se, XX, hūi se, XX, lú sè, XX, lán sè, XX, hūi sè, XX, zǐ s
 été, XX, fēn hón sè, XX”: here we came to the lesson of colors in Chinese. Year 6 students were saying “red, yellow, white, black, green, blue, grey, brown, purple and pink” in Mandarin and clapped their hands twice after saying each color. “XX” represented the interval meter. They managed to create their own color song. Not bad!

(Self-reflective journal, Term 3, 2016)

The two excerpts above have some features in common and both demonstrate that rhythm patterns were able to do the teacher-researcher a big favor. Students participated dynamically in the activities and finished tasks well. They were affected by the rhythm and it aroused interest in rhythm-related activities. The clapping activities built on past learning in a supportive way: they were structured, appropriately sequenced, linguistically principled and sufficiently challenging to ensure that learning took place (Hammond, 2001). Activities such as these provided the support necessary to enable effective Chinese language development so that the students were increasingly independent in their language use.

6.4.3 Using pop culture as a reminder device

The central issue for Mandarin learners is their ability to use Mandarin in an increasing range of contexts. To develop this ability successfully, they need to have an understanding of the cultural and situational contexts in which they have to use language, and then have the language resources to realize the meanings appropriate to those contexts (Hammond, 2001).

Australian students and Chinese students are different in many ways; however, they do share something in common if they are at the same education stage. Year 5 and Year 6 students are at the very early stage of teenagerhood; they adore the charm of pop music and pop cultures, especially the pop stars that are roughly the same age as they are. The teacher-researcher has tried many times combining English nursery rhyme tunes with Chinese lyrics, which has worked out well in practice. She also introduced Chinese pop songs and pop bands to Australian students, according to their age and level of development.

The Fighting Boys (TFboys), a popular teenage band in China, enjoys as great a reputation as Justin Bieber does in English speaking countries. There are three TFboys, whose average age is 13 years, and who are good at singing, dancing and acting. Many teenagers in China are attracted to this talented young band, and so were students in the teacher-researcher’s class. What they got out of this kind of Chinese music helped their learning in Chinese.
As soon as the students heard the name “Tfboys”, little conversations filled the classroom. “They may not be real boys, probably just some old guys.” “You know what, I was expecting to have like seven or ten of them to come out.” Then I showed them the photos of Tfboys – “Oh, my god, wait a minute, he is like thirteen, can’t be older.” “But these children, I’m not sure how they are in a band already.” “Wow, they look really adorable.” I followed this with the name of their representative song, Qīng chūn xiǎo lièn shǒu cè [Youth Practice Manual]. “Is this about how to be young again?” Students were so curious about this heart-throb band in China that plenty of questions arose. Then the music was turned on, and students’ reactions were: “I like the song, it is very happy.” “They’ve got some cool raps, and they are gonna be rock stars.” “The music is catchy and it flows pretty good.” “I hope this song actually plays on the school radio ’cause it is a nice song.” “I definitely will check it out more on YouTube.” Students couldn’t help shaking their bodies with the rhythm of the music, especially when it came to the peak part of the song. It seemed like an explosion of massive power. “Gēn zhē wǒ zuǒ shǒu yòu shǒu yī gè mǎn dòng zuò, yòu shǒu zuǒ shǒu màn dòng zuò chóng bō, zhè shì wǒ gěi ní kuài lè, nǐ yǒu méi yǒu ài shàng wǒ. [Follow my left hand right hand/ come on look at my way/ right hand left hand show my dreams some faith/ I am reaching to you/ nothing left to lose/ so tell me do you love me now.]”

(Self-reflective journal, Term 3, 2016)

The teacher-researcher couldn’t help being surprised that students wanted to learn the climax of this song and how quickly they remembered these two sentences. There is no doubt that this pop song is suitable for their learning level. As the old saying goes, “Make hay while the sun shines”. The teacher-researcher extended the students’ knowledge of Chinese on the basis of these lyrics. First of all, “nǐ yǒu méi yǒu ài shàng wǒ [do you love me]” was employed as a lead-in, then the sentence structure “nǐ yǒu... [do you have...]” was extracted, followed by the positive and negative expressions of answering, “wǒ yǒu [I have]” and “wǒ méi yǒu [I don’t have]”. Finally the activities related to “yǒu méi yǒu” were put forward, with a game practicing their pronunciation and listening comprehension as well as a translation task for improving writing and reading skills. Following are some screenshots from the PowerPoint presentation, which clarify the thorough extension parts.
Using pop culture as a reminder device in a rhythm-based teaching approach acquainted students with modern Chinese pop culture, and helped them to learn about the Chinese language and culture. The teacher-researcher also taught the students the dance actions to catch the rhythm of this song. With the permission of the students themselves, classroom teachers and caregivers, a video was recorded of the students singing and dancing in the class.

### 6.4.4 Developing capability as a language teacher-researcher

The relationship between scaffolding and what might be thought of as “good teaching” has been addressed by a number of researchers. Mercer (1994, as cited in Hammond, 2001) proposed the following criteria for distinguishing scaffolding from other kinds of teaching and learning:

- Students could not succeed without the teacher’s intervention.
- There must be evidence of students successfully completing the particular task at hand.
• There must be evidence that learners are now able to go on to deal independently with subsequent related tasks or problems.
• The teacher aims for some new level of independent competence on the part of the students.
• The teacher has the learning of some specific skill or concept in mind.

It is necessary to develop capability as a language teacher-researcher according to the above criteria, and it can be of great assistance to successfully build on knowledge through a rhythm-based teaching approach. The interview with classroom teachers and students provided valuable feedback regarding the teacher-researcher’s capability in language teaching, class design and classroom management. The interview excerpts below show that the teacher-researcher had some specific teaching skills or concepts, and aimed for independent competence on the part of the students.

**Teacher-researcher:** What do you think of my Chinese Classes? Which parts are successful?

**Classroom teacher A:** Your lesson is well-structured, sequentially natural and we have been building on children’s knowledge. I like the way that you have everything ready to go. And you always try to have some kind of activity that you do with your teaching, to get them to repeat the language, but then you also follow up straight away with an activity or a game in which they can practice what you have just taught. And for them, they enjoy that aspect.

**Classroom teacher B:** I think that your classes are quite varied, and you use a lot of different aspects of teaching, so you have made it practical. You have used IWB as a base, and they like practical activities and competitions, being given something to look forward to, and prizes as well. Yes, most kids do enjoy and are involved. They are noisy but that’s just the group of kids. I like the competitions. I really like the competitions between the children because it gets them more involved, you know, when there is a little bit of challenge, that gets them engaged a lot more.

(Interview with classroom teachers, 21 September 2016)

**Teacher-researcher:** Could you please provide any suggestions about my language teaching, classroom management skills or class design?

**Classroom teacher A:** Your lessons are well-structured, they are organized, so you know exactly what you are going to teach. That is very important. Sometimes there are activities in which only one or two are engaged because the nature of the question allows only one or two to participate and you can lose some around the outside because ... “well, here is their turn, I
don’t need to pay attention”. And it makes difficult. I can’t think a different way would allow 
you to monitor their language learning. It does need to be very individual and I think the only 
way is a smaller class, smaller groups, and we can’t do that. We don’t have the staff; we don’t 
have the rooms to give you. Because ideally 20 children would be maximum, you know, 15 or 
20 children would be maximum, that would ensure that most of the time they are 
participating, but we can’t do that for you and we have got 30, 35 children and that’s the 
reality. We can’t do it. **Your instructions to the children are usually very specific.** If you 
are using the wrong word, I always help you with the English language. Because that’s my 
job to help you to be the best you can. Since the very first week when you first started, the 
 improvement you can see, you have progressed along the road, **your teaching management 
skills are improving all the time.** So you are developing and growing as a person. You get 
more confident and that’s important because when you are working with the young teenagers 
or these older children, you need to be confident. Always put on a very confident face. 

Classroom teacher B: I like **positive enforcement**, you know, praise, for the competitions, 
the good way you are doing things, and you meet them outside to say “good morning, good 
afternoon” – that respect. **You are very consistent** now. Before, when you started, you would 
just keep teaching when someone was noisy, but now, you stop, which is much better, 
because they are not going to listen if you don’t.

(Interview with classroom teachers, 21 September 2016)

Teacher-researcher: Is there any part of our lessons you would like to change? 
Students: No. Perfect enough. 

The teacher-researcher: Can you help me to be a better teacher by telling me what activities 
you enjoy the most? 
Student A: Competitions. 
Student B: Partner activities. 
Student C: Singing. 
Student D: Actions. 

(Interview with students, 21 September 2016)

Since rhythm-based teaching pedagogy is based on scaffolded teaching, the teacher-
researcher’s Chinese lessons were considered “well-structured”, “sequentially natural” and 
“organized”. They have been building on children’s prior knowledge, with everything “ready 
to go”, and included practical activities, games or competitions straight away in which 
students could practice what was just taught. Although the teaching method could be quite 
varied, the teaching content was consistent most of the time.
Classroom teacher B also mentioned the impression of “the teacher-researcher’s positive reinforcement”. The teacher-researcher set up a relatively complete system with regard to appreciation and awards, both mental and physical. She praised students constantly, frequently using words such as “well-done”, “good job”, “fantastic”, “beautiful”, and “terrific”. Even those whose answers made no sense at all would be encouraged by way of “lovely” and “that’s a nice try”. And the “nǐ zhēn bāng (you’re terrific)” and “hěn hǎo (very good)” gesture were used frequently as well, with thumbs up. Students benefited from this encouragement. And they were very fond of Chinese tokens, the laminated paper-cuttings of the 12 Chinese zodiac animals. Ten tokens would be replaced by a small certificate for great achievement. If students earned four certificates, they would be given a special gift brought from China. Apart from these, a large certificate, signed by both the teacher-researcher and the principal, would be presented to the most outstanding student at the Friday assembly in front of the whole school. Students’ interest in learning of Chinese was stirred via appreciation and awards.

This study was an action research study, which enabled the teacher-researcher to self-reflect and try to improve all the time, both as a person and as a language teacher-researcher. Her instructions to the children were usually very specific, her teaching management skills were improving all the time, and she became more confident. All those qualities helped the teacher-researcher to make accurate judgments about what to teach, how to lead students and when to let them go. It was a project in what might be thought of as “good teaching”, helping students to find it fun and easy to learn Chinese.

6.5 Discussion and Conclusion

Chapter 6 is the third and last part of the data analysis, exploring the practical ways to scaffold a rhythm-based teaching approach to making Chinese learnable. In Table 13, scaffolding in rhythm-based action research is illustrated in its three aspects: laying the foundation, engaging students’ prior knowledge and employing other practical scaffolding assistance.
The first step was to lay the foundation for scaffolding, including knowing more about the students and suiting their learning levels. This is in accordance with the planning stage in action research. The second step was engaging students’ prior knowledge. In practice, this meant either transferring English songs to Chinese, combining Chinese lyrics with a well-known tune, or employing perceptions of English/Chinese similarities, paying close attention to the use of rhythm in Chinese language teaching and learning. Employing other practical scaffolding assistance was the third step, which consisted of teaching tones with humor, using clapping to emphasize words, using pop culture as a reminder device and developing capability as a language teacher-researcher. Among these, teaching tones emphasized the speech rhythm in Chinese, and developing capability as a language teacher reinforced the teacher-researcher’s role as a scaffolder.

The evidence in Chapter 6 proves that a rhythm-based teaching approach is practical. The final goal of scaffolding is to withdraw the teacher’s temporary support once students have
competence in completing tasks on their own, which is keeping with the aims of this research, that is, making Chinese learnable for students. Scaffolding enabled students to learn Chinese and allowed the teacher to consider learner-centered teaching questions, such as where to start, what to teach, and when to let go.
Chapter 7 Conclusion

This chapter summarizes the research as a whole, emphasizes the discussions and conclusions of key findings concerning the research questions, and presents limitations of the study and suggestions for further study. Particularly, it looks at specific teaching strategies and the advisory directions derived from and inspired by the rhythm-based teaching approach and experience.

7.1 Introduction
This thesis explored the application of a rhythm-based teaching approach to making Chinese learnable, within the context of the ROSETE program. According to an old saying in China, “Xíng chéng yǔ sī [Success is rooted in thinking]”, this chapter, acting as the reflection stage of the whole action research, reviews the preceding chapters, in particular looking at how the research addresses the research questions posed. Chapter 1 is a general introduction, Chapter 2 is a literature review, Chapter 3 presents methodology, and Chapters 4 to 6 contain the data analysis.

Chapter 1 introduced the background and significance of this study, put forward research questions, research aims and research outcomes, and presented the outline of the whole thesis. The main research question of this study was: How can a rhythm-based teaching approach be developed to make Chinese learnable for students in Western Sydney primary schools? The teacher-researcher was involved in the ROSETE program, and aimed to find an effective and efficient teaching approach to making Chinese more easily learnable for Australian students in the Western Sydney area. The application of a rhythm-based teaching approach achieved the expected research outcomes, such as stimulating students’ interest in learning Chinese, enhancing their abilities in continuous learning of Chinese and improving the teacher-researcher’s capability as a Chinese language teacher-researcher.

Chapter 2 summarized the main perspectives and the study orientations of the relevant literature reviewed. The definitions and typologies of rhythm were provided in this chapter, particularly for English as a stress-timed language and Mandarin as a syllable-timed language. Rhythm is a term with a wide range of applications, and this research focused on music rhythm and speech rhythm. The teacher-researcher investigated the relationship
between music and linguistics, its educational functions and teaching strategies. The speech rhythm of Chinese mainly consists of (pause, tone, intonation, duration, speech rate, stress and trochaic rhythm). Earlier rhythm-based studies, especially on English as a second/foreign language and Chinese as a second/foreign language, have been examined. From the helpful findings of other scholars, the teacher-researcher obtained relatively clear ideas about what to pay attention to.

Chapter 3 illustrated the methodology used in this qualitative action research, including research design, data sources, methods for data collection and data interpretation. Principles of research, such as ethical issues, reliability and validity, and generalizability were also discussed in this part. Research data were collected from observation notes, self-reflective journals, lesson plans, interviews and students’ work samples. The whole study was carried out in cycle implementation: planning stage, acting stage, developing stage and reflecting stage.

Chapter 4 was the first part of the data analysis, emphasizing students’ engagement in learning. According to their different features, the teacher-researcher discussed three types of engagement separately: affective engagement, cognitive engagement and operative engagement. Affective engagement refers to students’ positive feelings about and reactions to academic content, teachers, peers and school. Emotion coding was used to analyze participants’ affective engagement in Mandarin lessons. Cognitive engagement is students’ deep understanding of and expertise in the learning process, which is less observable and includes more internal indicators. Operative engagement refers to students’ active participation in working towards becoming more effective learners. Evaluation coding was employed in analyzing operative engagement. Teacher behavior affecting students’ learning engagement was also described in this part.

Chapter 5 was the second part of the data analysis, exploring the role of rhythm in three stages: before-class, class-processing and post-class stages. Use of rhythm caters for students’ natures, stimulates students’ learning interest and helps students to feel relaxed and confident. At the class-processing stage, rhythm plays an important role in enhancing students’ comprehension of the teaching content and in reducing the pain/gain ratio. Rhythm also makes it easier for students to remember and recall, sustains their learning motivation and
helps to establish a healthier teacher–student relationship in the post-class stage.

Chapter 6 was the third part of the data analysis, scaffolding rhythm-based teaching in practical ways: laying the foundation for scaffolding, engaging students’ prior knowledge and employing other practical scaffolding assistance. Knowing more about students and suiting students’ learning levels are the basis of scaffolding teaching. Engaging students’ prior knowledge is the key to scaffolding teaching. In this study this involved transferring English songs to Chinese, setting Chinese lyrics to a well-known tune and employing perceptions of English/Chinese similarities. In addition, teaching tones with humor, using clapping to emphasize words, using pop culture as a reminder device and developing capability as a language teacher-researcher provided other helpful practical scaffolding assistance.

7.2 Key Findings
Based on the data analysis and with the engagement of the teacher-researcher’s action research, prior knowledge and a review of the relevant literature, key findings were crystallized focusing on the three contributory research questions of this study: 1) How are students engaged in learning Chinese with the help of rhythm? 2) What roles can rhythm play in increasing learnability of Chinese for students? 3) How does a teacher scaffold a rhythm-based teaching approach in practical ways to make Chinese learnable? These three contributory questions work together to provide an answer to the main research question of this study: How can a rhythm-based teaching approach be developed to make Chinese learnable for students in Western Sydney primary schools?

7.2.1 Rhythm-based teaching makes students actively engaged in learning
The three dimensions of students’ engagement were clearly demonstrated in their learning process in this research: affective engagement, cognitive engagement and operative engagement. These three dimensions of engagement have different features and were not realized “simultaneously” (Munns and Woodward, 2006, p. 194). Therefore, the teacher-researcher discussed and analyzed them separately. Table 13 presents the advantages of rhythm-based teaching under specific types of engagement, and also the rhythm-related teaching content and activities undertaken in this study.
### Table 13. Three types of student engagement

<table>
<thead>
<tr>
<th>Types</th>
<th>Advantages of rhythm-based teaching</th>
<th>Rhythm-related teaching content and activities in this research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective engagement</td>
<td>• Lowers affective barriers in language learning</td>
<td>• Body parts and <em>Head, Shoulders, Knees and Toes</em> song</td>
</tr>
<tr>
<td></td>
<td>• Invokes students’ positive emotions: low anxiety, high self-confidence and motivation</td>
<td>• <em>Happy Birthday</em> song and birthday surprise for students</td>
</tr>
<tr>
<td></td>
<td>• Stimulates students’ interest in learning Chinese</td>
<td>• <em>Color Song</em> and coloring activities</td>
</tr>
<tr>
<td></td>
<td>• Inspires and sustains longer motivation for learning</td>
<td></td>
</tr>
<tr>
<td>Cognitive engagement</td>
<td>• Helps to set up motivational goals and self-regulated learning</td>
<td>• Musica Viva concert</td>
</tr>
<tr>
<td></td>
<td>• Involves deep understanding of and expertise in the learning process</td>
<td>• Speech competition and recitations of poems</td>
</tr>
<tr>
<td></td>
<td>• Develops students’ learning and problem-solving abilities</td>
<td>• <em>Happy Birthday</em> song and celebrate school’s 150 years anniversary</td>
</tr>
<tr>
<td>Operative engagement</td>
<td>• Makes students devote time, effort, persistence, concentration and attention</td>
<td>• Musica Viva concert</td>
</tr>
<tr>
<td></td>
<td>• Involves students asking questions, contributing to class discussions, participating actively in classroom activities and finishing tasks well</td>
<td>• <em>Color Song</em> and coloring activities</td>
</tr>
<tr>
<td></td>
<td>• Helps students become more competent, effective and empowered learners</td>
<td></td>
</tr>
</tbody>
</table>

As illustrated in Table 13. Three types of student engagementTable 13, rhythm-based teaching inspired students to actively engage in the class and enabled them to learn Mandarin. Rhythmic education does not correct every single type of rhythmic error made by students,
but focuses on accent and intelligibility (Zhang, 2015, discussed in Chapter 2). Students who have good control both in timing and pitch obtain the highest degree of naturalness of speech, while those wrong in both these aspects achieve the lowest degree of naturalness (Zhang and Tsuritani, 2013, discussed in Chapter 2). Songs, speech and poems are all related to timing, pitch and accent, which have great impact on naturalness in speaking a second/foreign language. The naturalness of speech achieved in this research project demonstrates/confirms the importance of student engagement in the process of making Chinese learnable.

Students’ affective engagement lowered affective barriers in language learning, invoked their positive emotions (low anxiety, high self-confidence and motivation), stimulated their interest in learning Chinese, and sustained longer motivation for learning. Cognitive engagement helped students to set up motivational goals and self-regulated learning, involved deep understanding of and expertise in the learning process, and developed their learning and problem-solving abilities. In operative engagement, or behavioural engagement, students devoted time, effort, persistence, concentration, and attention to their learning experience. They asked questions, contributed to class discussions, participated actively in classroom activities and finished tasks well. Students thus became more competent, effective and empowered language learners via these three kinds of engagement in learning. Although these three dimensions of engagement were discussed and analyzed separately, they have great impact on and are closely related to each other. Different types of engagement may transfer from one dimension to another, as shown in Table 14.

| Table 14. Students’ engagement transfer |

The most common transfer is from affective engagement to operative engagement; after all, emotions and actions are part of the same flow of events and cannot be separated from each other (Corbin and Strauss, 2008), and once students actively participated in the class
activities and achieved the focus of the teacher’s attention, their confidence and satisfaction grew, which is actually the process of transfer from operative engagement to affective engagement. Another transfer is from affective engagement or operative engagement to cognitive engagement. Scholars have reported that the most favorable learning occurs in a setting of low anxiety, self-confidence and high motivation (Engh, 2013). In this study, students gradually developed deep understanding and expertise during the learning process, which helped them to set up motivational goals and increased their problem-solving abilities. In turn, increased capabilities made them feel good about learning and they exhibited more willingness to complete the tasks in the Mandarin classes. This can be called the reversed transfer.

Rhythm-based teaching helped students to actively engage and participate in Mandarin lessons, in all three aspects of engagement: affective, cognitive, operative. This engagement made Chinese learnable for students.

7.2.2 Rhythm-based teaching plays an important role in increasing learnability
According to the data that the teacher-researcher collected, the roles rhythm-based teaching played in increasing Chinese learnability for students were played out in three different stages: the before-class stage, class-processing stage, and post-class stage.

At the before-class stage, rhythm-based teaching catered for students’ natural characteristics, stimulated their learning interest and made them relaxed and confident. Rhythm-based teaching enhanced students’ comprehension and reduced the pain/gain ratio during classes. At the post-class stage, rhythm-based teaching made it easier for students to remember and recall, sustained their learning motivation and helped to establish a healthier teacher–student relationship.

Although the roles rhythm-based teaching played in increasing learnability were discussed separately in the three stages, each of these roles could appear at more than one stage in the process of learning Chinese. The rhythm-based teaching approach worked constantly to make Chinese learnable for students, and to make learning a new language sustainable.

7.2.3 Scaffolding rhythm-based teaching in practical ways
The teacher-researcher has clearly shown the structure of scaffolding in rhythm-based
teaching in Table 13 (Chapter 6), and she would like to re-emphasize the practical scaffolding methods through the employment of the Chinese proverbs: 量体裁衣 (liàng tǐ cái yī), 聚沙成塔 (jù shā chéng tǎ), 因时制宜 (yīn shí zhì yí), 教学相长 (jiāo xué xiāng zhǎng) and 学以致用 (xué yǐ zhì yòng).

First, “量体裁衣 (liàng tǐ cái yī)” literally means cutting the dress according to one’s figure, matching the first step of scaffolding, “lay the foundation”. The idiom describes the process by which the teacher-researcher initiated entry into the students’ world and discovered more about this group of learners, so as to design teaching content suited to their learning level. This could also be called “入乡随俗 (rù xiāng suí sú)” to some extent, which means to do as the Romans do. Since Chinese students and Australian students are different in many ways, it was necessary for the teacher-researcher to observe the specific characteristics of her Australian students, their learning habits, topics of interest and so on, then transfer or apply these Australian styles to her teaching of Mandarin. “Student’s figure” is the pattern for “the dress”. Only when the teacher-researcher knows enough about the “student’s figure” can she scaffold effective teaching.

Second, “聚沙成塔 (jù shā chéng tǎ), describes a phenomenon whereby sand accumulates to form a pagoda. It highlights the effect of continuity and sequence in the learning and teaching of Chinese. Learning new knowledge is similar to this pagoda-building process, in which learners begin with simple words and phrases, then in a particular order build larger language units such as sentences and conversations. This also requires continuity in lesson design; lessons cannot be treated as isolated units. Therefore, the teacher-researcher engaged students’ prior knowledge in her scaffolded teaching, transferred English songs to Chinese, setting Chinese lyrics to a well-known tune, and employed perceptions of English/Chinese similarities. She paid close attention to the accumulation of the teaching topics as well. To illustrate, number is the main clue working through topics such as age, phone numbers, birthdays, data, time and prices.

The adage “教学相长 (jiāo xué xiāng zhǎng)” requires that one learns while teaching. This idiom puts forward the idea of consciously weakening the teacher-researcher’s authority, and regarding students as equal knowledge contributors. The teacher-researcher deeply believes that teaching and learning is a mutual process; as a result, she developed her capability as a
language teacher-researcher to assist with practical scaffolding. The teacher-researcher valued students’ voices, knowledge and experience, then brought those into their learning of Mandarin. Negotiation and mutual learning between the teacher-researcher and students are important in the process of scaffolding.

“因时制宜 (yīn shí zhì yí)” represents the need to plant right crops at right time, meaning that teaching strategies need to be adjusted at different stages of teaching. Students tended to react differently to the teacher-researcher’s ways of teaching at various stages of learning; therefore, flexible teaching strategies should be used according to their reactions. At the beginner stage, the teacher-researcher provided temporary support and help for the students in learning the new language. When they obtained a deeper understanding and expertise in Mandarin, and could complete learning tasks on their own, she started to withdraw her support. The adjustment of teaching strategies in the scaffolding of teaching is similar to planting suitable crop at a suitable time.

Finally, “学以致用 (xué yǐ zhì yòng)” signifies learning by application. The ideal and expected outcome from this research was that a rhythm-based teaching approach enabled students to learn Chinese and increased their willingness to use the target language in their daily lives. The final aim of scaffolding teaching is that students can keep learning by themselves, and the practical application of language is the best way to keep learning.

7.3 Implications for Beginner Teachers

The author of this study, as a beginner teacher, reflected on her own teaching all the way through the research, which may provide an example to promote the professional growth of other beginner teachers. At the end of each chapter of data analysis (Section 4.2.4. “Teacher behavior and student engagement”, Section 5.4.3. “Help to establish a healthier teacher–student relationship”, and Section 6.4.4. “Developing capability as a language teacher-researcher”), the teacher-researcher discussed the great impact of a teacher’s professional development and practical knowledge.

This study has revealed some teaching methods, teaching strategies, methods of teaching management and teaching language which may be useful to other beginner teachers, especially those who aim to be a second-language teacher. Those ideas will help beginner
teachers to engage in professional identity formation and transformation, and facilitate their becoming acquainted with students whose background is not in the language being taught.

The following excerpt from the teacher-researcher’s interview transcript also provides some ideas about physical activities in teaching for other beginner teachers. It will make learning interesting and memorable to allow students make physical movements instead of answering questions directly. The teacher-researcher did not have the chance to apply this idea; however, it may inspire other beginner teachers.

**Teacher-researcher:** Do you have any games or activities to intensely engage the students, that I can use in Chinese class?

**Classroom teacher B:** Actually, some of the activities that I have learned just this term are to involve students in doing some physical activity in the class. For example, instead of “this is A or B”, the answer you can do is “that wall is A” and “this wall is B”. If they are choosing A or B, they can move to the side, so they actually get up and move, which can be a little bit difficult because we have a lot of students and very limited room, but you can do these sorts of things outside. You can make a lesson of just physical activity outside. They can do dancing, and they can also do questions and answers just like a quiz. But with the answer, ok, this is A, B, C or D [the teacher drew a picture on the paper to clarify] and if they think which one of these it is, they can go to a corner there, and they can go to it if they need do. You can stand in the middle and ask another question, they can move again. I find that working with a lot of kids. Times table or numbers is another one. Okay, so, for example, what is this number? They put up their hands and say “seven”, so you can say to them what kind of activities they are to do, “seven claps or seven star jumps or seven punches in the air”, that sort of thing.

(Interview with classroom teachers, 21 September 2016)

7.4 **Recommendations**

This study should be of value to the education field, but its limitations need to be noted. First, there was a time limitation. The teacher-researcher had only one and half years to conduct the research; therefore, some of the newly born ideas have not been fully put into practice. Also, there was not enough time to adequately verify the effectiveness of other variables in the study, which may slightly influence the reliability of the research data. Furthermore, there is limited generalizability, due the limited selection of participants, although there is richness in the data about this small group. Since this action research is conducted with a pre-existing
group of students, it does not represent a random selection from a larger population. With the awareness of such limitations, the teacher-researcher has provided sufficient information about the study to enable others to draw an analogy. The findings of this study of a rhythm-based language teaching approach also contribute to the application of teaching Chinese. Non-Chinese background students beyond the participants of the study may also benefit from it as long as the teaching approach is popularized and generalized.

Since there were limitations, the teacher-researcher has also provided several recommendations and suggestions for future study. The first recommendation is that a long-term research study should be conducted to examine the effectiveness of a rhythm-based teaching approach. The participants of the current research were beginner Chinese language learners, so the teaching content was limited to simple words and sentences. Only through a longer term study can the effects of teaching higher level language points using a rhythm-based approach be explored.

The second recommendation is that a larger number of participants should be involved to better develop the generalizability of the research. The participants in this research were Year 5 and Year 6 students in Tianyuan School, but the characteristics and personalities of Australian students can vary among different school and classes. If more types of participants were included in further study, the generalizability of rhythm-based teaching could be ascertained. If these recommendations were to be implemented, then the credibility of the rhythm-based teaching method could be enhanced.
References


Renniger, S. Hidi & A. Krapp (Eds.), *The role of interest in learning and development* (pp. 3-27). Hillsdale, NJ: Lawrence Erlbaum.


Retrieved 8 March, 2017 from [www.oed.com](http://www.oed.com)


Cambridge, UK: Cambridge University Press.


Appendix 1 Approval of Human Research Ethics Committee (NEAF)

Locked Bag 1797
Penrith NSW 2751 Australia
Office of Research Services

ORS Reference: H11510

HUMAN RESEARCH ETHICS COMMITTEE

6 April 2016

Associate Professor Anne Power
School of Education

Dear Anne,

I wish to formally advise you that the Human Research Ethics Committee has approved your research proposal H11510 "An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools", until 31 March 2017 with the provision of a progress report annually if over 12 months and a final report on completion.

Conditions of Approval

1. A progress report will be due annually on the anniversary of the approval date.

2. A final report will be due at the expiration of the approval period.

3. Any amendments to the project must be approved by the Human Research Ethics Committee prior to being implemented. Amendments must be requested using the HREC Amendment Request Form:

4. Any serious or unexpected adverse events on participants must be reported to the Human Ethics Committee via the Human Ethics Officer as a matter of priority.

5. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the Committee as a matter of priority.

6. Consent forms are to be retained within the archives of the School or Research Institute and made available to the Committee upon request.

Please quote the registration number and title as indicated above in the subject line on all future correspondence related to this project. All correspondence should be sent to the email address humanethics@westernsydney.edu.au.

This protocol covers the following researchers:

Anne Power, Jinghe Han, Michael Singh, Xin Zhu

Yours sincerely

Professor Elizabeth Deane
Presiding Member,
Human Researcher Ethics Committee
Appendix 2 State Research Approval Process Approval (SEARP)

Miss Xinran Zhu
Western Sydney University
Great Western Highway
Kingswood NSW 2747

Dear Miss Zhu

I refer to your application to conduct a research project in NSW government schools entitled An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools. I am pleased to inform you that your application has been approved.

You may contact principals of the nominated schools to seek their participation. You should include a copy of this letter with the documents you send to principals.

This approval will remain valid until 31-Mar-2017.

The following researchers or research assistants have fulfilled the Working with Children screening requirements to interact with or observe children for the purposes of this research for the period indicated:

<table>
<thead>
<tr>
<th>Researcher name</th>
<th>WWCC</th>
<th>WWCC expires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xinran Zhu</td>
<td>WWC0790422V</td>
<td>20-Aug-2020</td>
</tr>
<tr>
<td>Anne Power</td>
<td>WWC0801461E</td>
<td>04-Sep-2020</td>
</tr>
</tbody>
</table>

I draw your attention to the following requirements for all researchers in NSW government schools:

- The privacy of participants is to be protected as per the NSW Privacy and Personal Information Protection Act 1998.
- School principals have the right to withdraw the school from the study at any time. The approval of the principal for the specific method of gathering information must also be sought.
- The privacy of the school and the students is to be protected.
- The participation of teachers and students must be voluntary and must be at the school’s convenience.
- Any proposal to publish the outcomes of the study should be discussed with the research approvals officer before publication proceeds.
- All conditions attached to the approval must be complied with.

When your study is completed please email your report to: serap@det.nsw.edu.au
You may also be asked to present on the findings of your research.

I wish you every success with your research.

Yours sincerely,

Dr Robert Stevens
Manager, Research
12 July 2016

School Policy and Information Management
NSW Department of Education
Level 1, 1 Oxford Street, Darlinghurst NSW 2010 – Locked Bag 53, Darlinghurst NSW 1300
Telephone: 02 9244 5000 – Email: serap@det.nsw.edu.au

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Appendix 3: Participant Information Sheets (Parents/Caregiver)

Information for Parents and Caregivers

Your child is invited to be in a research study by Miss Xinran Zhu and the research will find out how to make Mandarin exciting and fun to learn.

Project Title:
An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools

Who is carrying out the study?
Miss Xinran Zhu, the Chinese teacher is carrying out this study.

What is the study about?
The research is about making Mandarin more exciting to learn. It uses rhymes and rhythmic patterns to make learning Chinese easier.

What does the study involve?
Your child participates in Mandarin lessons each Wednesday and will be observed during the rhythm-based teaching activities. Sometimes I will make video recordings of the lessons which will show how your child went in them. A group of 5-10 students, called the focus group, will be asked some questions and provide ideas (giving feedback) about the activities at the end of every term. If your child does not wish to participate, he/she will still be able to undertake the Mandarin classes but will not be involved in the focus groups.

How much time will the study take?
The lessons are like normal—45 minutes and the focus group interview will be done twice and will last 15 minutes.

Will the study benefit me?
Your child will have the chance to help make the learning of Mandarin fun and exciting. His/her opinion is very important to me.

Will anyone else know the results? How will the results be used?
No, only I and my supervisors at the university will read them. Your child information will put into research paper, but his/her name won’t be used in my project out of privacy reasons. Other university teachers will read this paper and maybe use the information to make teaching and learning of Mandarin more fun.

Can I withdraw my child from the study?
Yes, of course your child can withdraw from the project at any time. He/she will still be participating in the activities but not be part of the feedback group.

Can I tell other people about the study?
Yes, you can tell other people about this exciting project.

What if I require further information?
If you would like to know more about any aspect of the project, please feel free to contact me at Tel: +61481862886 or via email: 184855550@student.westernsydney.edu.au
**What if I have a complaint?** This study has been approved by the Western Sydney University Human Research Ethics Committee, the Approval number is [H11510]. But you can tell the classroom teachers or the Principal of the school.
Appendix 4: Participant Information Sheets (Classroom Teachers)

Information Statement (Classroom Teachers)

School of Education
University of Western Sydney
Locked Bag 1797
Penrith NSW 2751
Australia
Telephone: 0481862886
Email: 18485295@student.uws.edu.au

Participant information sheet (classroom teachers)

Project Title:
An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools

Project Summary:
You are invited to participate in a study conducted by Chinese teacher Miss Xinran Zhu and the research will form the basis for the Master degree of Philosophy (Education research) at the Western Sydney University under the supervision of Associate professor Anne Power, Professor Michael Singh and Dr. Jinghe Han.

How is the study being paid for?
The study is voluntary work. No payment is involved.

What is the study about?
This research aims to find an effective and efficient way to teach Chinese to English background learners, and develops a rhythm-based teaching approach to make Chinese learnable for students in Western Sydney primary schools. The research will use the repetition of rhythmic rhymes as a learning approach.

What will I be asked to do?
During the course of the Chinese lessons, you will be invited to observe the teacher researcher’s teaching practice and the students' performance. At the end of each term, you will be interviewed at agreed time to give opinions, suggestions and feedback on the rhythm-based teaching approach and students' performance. The interview would be recorded in audio. Interview transcripts and written feedback will be used as data in the study with your permission.

How much time will the study take?
Observations will be conducted once a week during three terms for normal Chinese lessons in 2016. Semi-structured interviews will be conducted at the end of each term. There are three interviews for three terms to be proposed. It will be finished within half an hour.

What specific benefits will I receive for participating?
This study may be of benefit to your knowledge of ways to improve the teaching and learning of Chinese. In particular, it may enable you to get a better understanding of your students' performance in their class. Also, this study may give you an understanding of Chinese language and culture.

Will the study have any discomfort?
The study will not cause any discomfort for you. The participation is voluntary. If you do not want to participate, it will not affect the relationship between you and the researcher and will not affect the researcher’s Chinese teaching to your class. You can withdraw at any time you want. Any information which has already been collected from you will be withdrawn totally.
How do you intend to publish the results?
No one can identify you from the results of this study. Only the researcher and her supervisors have access to the data collected from you with ethical permission. The data recorded from the interviews will be kept as the computer files which will require a password for access and will be stored for five years, after which will be completely deleted. The result of this study might be disseminated through a master thesis, short and long SEARP reports and publications with joint name of the research and the supervisors.

Can I withdraw from the study?
Your participation in the study is entirely voluntary: you are not obliged to consent. You can withdraw from the study at any time without giving any reason and without any consequence. Then, any data which has already been collected from you will be deleted totally.

Can I tell other people about the study?
Yes, you can tell other people about the study by providing them with the chief investigator's contact details.

What if I require further information?
If you would like to know more at any stage, please feel free to contact Miss Xinran Zhu (Tel: 0468624234, E-mail: 18485530@student.uws.edu.au)

What if I have a complaint?
If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0015 or email humanethics@uws.edu.au.

Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

If you agree to participate in this study, you may be asked to sign the Participant Consent Form.
Appendix 5: Participant Information Sheets (Students)

Information for Students

You are invited to be in a research study by Miss Xiran Zhu and the research will find out how to make Mandarin exciting and fun to learn.

Project Title:
An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools

Who is carrying out the study?
The Chinese teacher Miss Xiran Zhu is carrying out this study.

What is the study about?
The research is about making Mandarin more exciting to learn. It uses rhymes and rhythmic patterns to make learning Chinese easier.

What does the study involve?
Participate in the lessons each Wednesday and then some of you will be able to give feedback on how the lessons went or how you found learning the Mandarin language. Miss Zhu sometimes will make video recordings of the lessons which will show how you went in them. Further, a group of 5-10 students, called the focus group, will be interviewed at the end of every term. Questions will be asked about your opinions of the lessons and how you felt about using rhythms and rhythmic patterns to learn Mandarin. If any student does not wish to participate, they will still be able to undertake the Mandarin classes but they will not be involved in the focus groups.

How much time will the study take?
The lessons are like normal-45 minutes and the focus group interview will be done twice and will last 15 minutes.

Will the study benefit me?
You will have the chance to help make the learning of Mandarin fun and exciting. Your opinion is very important to me.

Will anyone else know the results? How will the results be used?
No, only Miss Zhu and her teachers at the university will read them. Your information will put into a special story called a research paper. Other university teachers will read this paper and maybe use the information to make teaching and learning of Mandarin more fun.

Can I tell other people about the study?
Yes, you can tell other people about this exciting project.

What if I require further information?
You can ask Miss Zhu at the end of the lessons at school.

What if I have a complaint?
This study has been approved by the Western Sydney University Human Research Ethics Committee but you can tell your teachers or, the Principal of the school.
Appendix 6: Participant Consent Sheets (Parents/Caregiver)

School of Education
University of Western Sydney
Locked Bag 1797
Penrith NSW 2751
Telephone: 0481862886
Email: 18485295@student.uws.edu.au

Human Research Ethics Committee
Office of Research Services

Participant Consent Form for Parents and Caregivers

This is a project specific consent form. It restricts the use of the data collected to the named project by the named investigators.

I, ........................................... give consent for my child ........................................... to participate in the research project titled An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools.

I acknowledge that:

I have read the participant information sheet and have been given the opportunity to discuss the information and my child’s involvement in the project with the researcher/s.

The procedures and the time involved in the project have been explained to me, and any questions I have about the project have been answered to my satisfaction.

I have discussed participation in the project with my child and my child agrees to his/her participation in the project.

I understand that my child’s involvement is confidential and no information about my child will be used in any way that reveals my child’s identity.

I understand that my child’s participation in this project is voluntary. I can withdraw my child from the study at any time.

I consent my child to participate the research of Miss Xinran Zhu.

Signed (Parent/Caregiver):        Signed (child):

Name:                           Name:

Date:                          Date:

This study has been approved by the University of Western Sydney Human Research Ethics Committee. The Approval number is: [H11510]. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61247360229 Fax +61247360013 or email humanethics@uws.edu.au
Appendix 7: Participant Consent Sheets (Classroom Teachers)

Participant Consent Form for Classroom Teachers

Human Research Ethics Committee
Office of Research Services

Participant consent form (classroom teachers)

This is a project specific consent form. It restricts the use of the data collected to the named project by the named investigators. Where projects involve young people capable of consenting, a separate consent form should be developed. A parental consent form is still required.

Project Title: An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools

I, ........................................, consent to participate in the research project titled An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools.

I acknowledge that:

I have read the participant information sheet and have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.

The procedures required for the project and the time involved have been explained to me, and any questions I have about the project have been answered to my satisfaction.

I consent to the voluntarily participate in Miss Xinran Zhu’s research.

I consent to be interviewed at the end of each term and I would like to give my opinions, suggestions and feedback on Miss Xinran Zhu's Chinese teaching practice and students' performance. I consent to the audio recordings of interviews.

I understand that my involvement is confidential and that the information gained during the study may be published but no information about me will be used in any way that reveals my identity.

I understand that I can withdraw from the study at any time, without affecting my relationships with the researcher now or in the future.

Signed

Name:

Date:

Return Address: I 1.21 School of Education, University of Western Sydney, Locked Bag 1797, Penrith NSW 2751

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If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix 8: Interviews Questions for Classroom Teachers

As semi-structured interviews were conducted in this action research, prepared interview questions for two classroom teachers are listed below, while other questions popped up during the process of the interview.

1. What do you think of my Chinese classes? Which parts are successful?
2. Do you think students are engaged during the class, especially when I teach them songs or conduct rhythm-related activities?
3. Do you have any games or activities that highly engage the students that I can use in Chinese classes?
4. How does the students’ performance compare to that in other classes?
5. Can you, yourself, understand the teaching content of my lesson? Is it suitable to the students’ learning ability?
6. Could you please provide any suggestions about my language teaching, classroom management skills or class design?
Appendix 9: Interviews Questions for Students

As semi-structured interviews were conducted in this action research, interview questions for students are listed below (both original and revised version), while other questions popped up during the process of the interview.

Original version

1. In what ways do this term’s Chinese classes help you learn?
2. Are there any ways in which they do not help you learn?
3. Which lesson or part appeals to you most? Why?
4. Can you understand and grasp the content we have learned? Is it too difficult or too easy for you?
5. Do you like the songs taught in the class? Why or why not?
6. Are rhythm-related activities helpful in learning Chinese? Do you want me to add more activities like these in future classes?
7. Could you please provide any suggestions about the activities or the content that you would like to have in the class?

Revised version

1. Name one way that our class helps you learn new words or ideas.
2. Is there any part of our lessons you would like to change?
3. What part is the most fun or the best part of our lesson? Why?
4. When we are learning new words, are you able to remember them the next week?
5. Do you enjoy learning new songs? Do you like our pattern of rhythm exercises? Why?
6. Are rhythm-related activities helpful in learning Chinese? Do you want me to add more activities like these in future classes?
7. Can you help me to be a better teacher by telling me what activities you enjoy the most?
Appendix 10: One Sample of a Lesson Plan

Time: 30 mins
Class: Year 5

Teaching aim: Let students comprehend and master the Chinese nursery rhyme <十个小印安小朋友>

Teaching difficulties: The usage of "个 (gè)"
Teaching assistance: PowerPoint, smart board

Teaching process:

Step 1: Warming up (5 mins)
3) Play the video of the English version of Ten Little Indians; let students listen to and familiarize themselves with the rhythm.
4) Play the song a second time; let them sing along with it.

(Explanatory: Some students have already learned this English song in pre-school, while the majority has not. Here is the link which provides the “sing along” part: https://www.youtube.com/watch?v=tln1otW2Or0)

Step 2: Introduction of knowledge (15 mins)
7) Listen to the Chinese version of the song. Here is the link: https://www.youtube.com/watch?v=YWrXsl10rW0&feature=related
8) Hand out lyrics papers and explain the lyrics. Below are the lyrics; the words in black are repeated four times, while the red parts change every single line.

yī gè, èr gè, sān gè xiāo péng yǒu,
sì gè, wǔ gè, liù gè xiāo péng yǒu,
qī gè, bā gè, jiǔ gè xiāo péng yǒu,
Shí gè yīn dì ān xiāo péng yǒu.

9) Revise numbers 0–10 so that students will confirm that the red words are the numbers already learned. Here is the link to the number song that the children enjoy:
https://www.youtube.com/watch?v=2eLP3FuuEVs&list=PLiVDMVXQVhRnRGQU-AUrlbWmf88VTV5H

10) Revise “péng yǒu” and introduce “xiāo” and “xiāo péng yǒu”. Below are some screenshots of the PowerPoint presentation.

11) Ask students how to say “one friend” in Chinese and then lead into the introduction of “个 (gè)”. Below are some screenshots of the PowerPoint presentation.

12) The whole class listens to the Chinese song again and sings along with it.
(Explanatory: Knowledge is built up and up gradually. Before the delivery of this lesson on the song, I have already taught them the basic numbers and words such as “tóng xué (同学)”, “péng yǒu (朋友)”, “xué shēng (学生)”, so they will still feel safe when
Step 3: Consolidation (7 mins)
5) The whole class sings the Chinese song <十个印第安小朋友> without the accompanying video.
6) All the girls sing the song and then all the boys.
7) Invite two volunteer students to sing the song in front of the class.
8) Invite individuals to sing the song.
(Exploratory: Repetition is an important habit in learning language. Positive assessments, such as a round of applause, “很好” gesture and “你真棒” gesture shall be properly used as encouragement.)

Step 4: Summary and homework (3 mins)
3) Let the whole class sing along with the video once again.
4) Ask the students to take the lyrics paper home and sing the song to parents.
(Exploratory: This could be a great success in extending the knowledge to their daily lives.)