

**NON-BACKGROUND CHINESE LEARNERS’  
PRONUNCIATION ACQUISITION THROUGH LANGUAGE  
TRANSFER: AN ACTION RESEARCH  
IN A SYDNEY PUBLIC SCHOOL**

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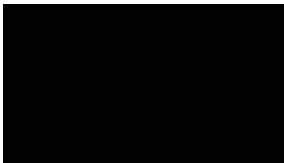
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## **Declaration**

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 Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.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 language transfer teaching approach to make Chinese (Mandarin) learnable for young beginning learners. A qualitative action research methodology was chosen as most relevant to improve the teacher researcher's teaching practice in a primary school in Australia over three school terms/ three research Cycles. The aim of this research was to find a suitable language transfer-based teaching approach to make Chinese learnable to non-background Chinese learners. The overarching research question was: How can students' L1 (English) be employed to facilitate the pronunciation acquisition in their L2 (Chinese) learning? Ringbom's (2007) contention that there are three cross-linguistic similarity relations between languages: "similarity relation", "contrast relation", and "zero relation" was implemented to explore the research question. Grounded in the outcomes of Cycle 1 teaching and learning the teacher researcher refined Ringbom's (2007) three categories into two – "Similar Relation" and "Non-relation" and continued to implement this framework in Cycles 2 and 3.

Based on the data analysis and informed by a review of the literature, this action research found that Mandarin and English do share various phonetic similarities of vowels and consonants. In addition, identification and application of such phonetic similarities (language transfer) between Mandarin and English helped young beginning learners to engage in Mandarin pronunciation lessons more effectively and

confidently. This research also explored the tensions for teaching and learning pronunciation when no similarities could be identified in the Mandarin vocabulary to be taught. Various supplementary teaching approaches were developed and implemented to assist the young learners' Mandarin pronunciation when "Non-relation" between the languages was identified.

This thesis has concluded with an in-depth discussion of the findings in relation to the research question and its contributory questions. This has resulted in a list of teaching strategies being offered for other like-minded teacher researchers to trial.

# **CHAPTER 1**

## **INTRODUCTION**

This Chapter has commenced with an outline of the contextual information relevant to this research, the research program in which the teacher researcher participated and an overview of her pertinent educational and practical experiences. Chapter 1 then has proposed the research aims, questions, and has concluded with the significance and proposed value of this research project.

### **1.1 Background Information**

In China the teaching of Mandarin has been guided by the policy mandated by the Department of Education of the People's Republic of China (PRC) (2011) document, that students must learn Pinyin, speak Modern Standard Chinese (MSC), learn to read 3,500 commonly used Chinese characters, and write Chinese characters correctly with a certain degree of speed and accuracy depending on their age and ability. However, students who learn Mandarin as a second language need to have different goals and teaching methods to support their learning. To be specific, as the Australian Curriculum has stated, the learning of Chinese as a foreign language for beginning learners has stipulated learning Modern Standard Chinese (MSC) – Pinyin Romanization and simplified characters (ACARA, 2013).



In recent years, public schools in Australia have promoted Teaching Chinese as a Foreign Language (TCFL) pursuant to the Melbourne Declaration on Educational Goals for Young Australians (Chen, 2015, p.933) as well as the National Asian Languages and Studies in Schools Program (NALSSP) of the Rudd government (Chen, 2015, p.933). In addition, the Chinese K-10 Syllabus in New South Wales (NSW) (Board of Studies NSW, 2003) has suggested that MSC as an approach supports students to develop communication skills, regard language as a system, and acquire insights into the relationship between culture and language, which would bring lifelong personal, educational and vocational benefits.

The cooperation between China and Australia has gradually strengthened “characterized by bilateral relationships in trade and investment, as well as educational exchanges, research and development in science and technology” (ACARA, 2013, p. 3). This rich and complex relationship has been shaped by the synergistic movement of people and ideas with economic, culture and educational exchanges. As for language education, Chinese has been learned and taught as an additional language in Australian public schools since the 1950s (ACARA, 2013, p.3), with the teaching of Chinese as a foreign language being supported by government policy. The Australian Government aimed to have at least 12% of Year 12 Australian students speaking fluent Chinese, Japanese, Indonesian or Korean by the end of 2020 (Asia Education Foundation as cited in Chen, 2015). It has also been noted that:

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; All students will have access to at least one priority Asian language; these will be Chinese (Mandarin), Hindi,

Indonesian and Japanese (Asia Education Foundation, cited in Chen, 2015, p. 16).

In response to these ‘drivers’, Australia has developed approaches to promote the learning of Chinese through the efforts of authorities, organizations and the national government through its education systems. However, it has been noted that there continues to be unsatisfactory results in the progress of Chinese language teaching in Australia (Orton, 2008), who has contended that an extremely high rate (94%) of English-speaking learners drop out of Chinese language classes even before completing secondary school. In 2011, out of 72, 391 Year 12 NSW students who participated in the Higher School Certificate (HSC) examination, only 1,091 (1.5%) students studied the Chinese language (Herscovitch, 2012). Other studies have concluded similar results indicating particularly low rates of accomplishment by English-speaking background learners (Scarino et al., 2011; Scrimgeour, 2012). Similarly, it has been reported that those students who continue and eventually finish Chinese language programs have tended to be first language speakers of Chinese (Asia Education Foundation, 2008; DEEWR, 2010). In this context, the current state of Chinese language teaching in Australia can be regarded as “teaching Chinese to Chinese” (Orton, 2008, p. 4), which defeats the objectives to have Australia and Australians competent to engage with China and its people in the 21<sup>st</sup> century. Confronted with these facts, the priority course of action to achieve the aspirational goal by 2020 has been to target the retention of non-Chinese background Australian school students to Chinese language programs (Asia Education Foundation, 2008; DEEWR, 2010). Armed with this evidence of the Australian government’s aspirations for students to learn Chinese and the consequential challenges also noted, this research aimed to address these issues at a local level by investigating effective

teaching strategies which could have the potential of making Chinese an easier language for young beginning learners.

However, particularly at the local level Chinese language teachers in Australia continue to face obstacles. Not all public schools adopt an official Chinese language teaching curriculum, nor have all developed whole of school programs in which to support Chinese language learning. Moreover, resources for improving the teaching skills of Chinese teachers have not been easily obtainable (Singh & Han, 2014). Hence, the key focus of this research is to develop methods to make the Chinese language learnable, specifically in respect of pronunciation. The concept of “making Chinese learnable” (Singh & Han, 2014) refers to three interconnected educational aims:

- 1) using the learners’ recurring, everyday sociolinguistic activities undertaken in English to teach the same activities in Chinese, capitalizing on the cross-sociolinguistic similarities between the two languages;
- 2) creating successful and rewarding language learning experiences for learners through resourceful and innovative teaching/learning strategies that encourage them to spend more time practicing Chinese in their everyday lives; and
- 3) creating supportive learning environments by school principals, teachers and parents, which will foster the desire of learners to continue learning about the Chinese language, the modern 21st century China, and the dynamics of person-to-person interactions with Chinese people” (Singh & Han, 2014, pp. 404-405).

The first aim has emphasized the significance of the social experiences students have had and to consider how this can be utilized in teaching. When introducing new knowledge, teachers need to consider the existing knowledge of the students. For example, if students do not understand mathematics, teachers should not teach them to count by hundreds in Chinese because this would challenge their cognitive load. The second aim has highlighted the sense of achievement, based on the assumption that if the students can communicate in Chinese with their peers immediately after their Chinese language class, then confidence and satisfaction would be increased impacting positively on motivation. The third aim has signified the need for constant professional development of teachers of Chinese language and that resources for this may not be readily available.

## **1.2 Study Context for This Research**

The Research-Oriented, School Engaged Teacher-researcher Education (ROSETE) Program has been operating at Western Sydney University for over ten years. This is the Program that has provided the context for this research and study.

The ROSETE Program has been established through a co-operative international partnership between the New South Wales Department of Education (NSW DE), the Western Sydney University (WSU) and the People's Republic of China, Ningbo Municipal Education Bureau (NMEB). The ROSETE program has a threefold learning focus. The primary purpose of the ROSETE program has been to facilitate the teaching and learning of the Chinese language among non-Chinese background beginners in Australian public schools. The second strand within the ROSETE program has focused on the education of the participants, who are Higher Degree Research (HDR) candidates, while at the same time taking on a Chinese language

teaching assignment in local New South Wales public schools. Participants in the ROSETE program have the title of teacher researchers, and are volunteers Chinese language teachers in their assigned public schools. The third dimension has been referred to as the inter-organizational learning, which requires the teachers in the public schools, the university academics and the ROSETE teacher researcher/volunteers to be involved in the program, to work together and make a positive impact on organizational learning (Singh, 2013, pp.8-9). The term “teacher researcher” could be understood as a practical theorist, where the teacher as researcher has the central position in both their work (teaching) and the contexts in which they work. Dana & Yendol-Hoppey (2014) have contended that meaningful teacher research needs to encompass daily teaching accompanied by meaningful research on daily practices in order to improve practice; this paradigm has significance to the volunteers within the ROSETE program. Teacher researchers, especially those involved in making Chinese learnable for non-Chinese background beginners in Australian public schools, have a commitment that their efforts will have lifelong value.

### **1.3 The Teacher-researcher’s Background**

As one of the candidates from the Ningbo Municipal Bureau of Education to join the ROSETE program, this teacher researcher had passed the IELTS test with an overall score of 6.5. In addition, she scored Second Class Division One in the Mandarin test, which was the level required for qualified Chinese teachers. The generic Mandarin test does not necessarily favour all native Chinese speakers equally as local dialects impact on pronunciation during oral examinations. This was the case for the teacher researcher, who struggled with the pronunciations of certain Chinese characters

which were totally different from the dialect in her hometown. However, this experience proved to be a valuable experience in understanding the challenges in oral pronunciation encountered when teaching the standard Chinese language to non-Chinese background beginners in Australian public schools.

As an English Major, the teacher researcher had also acquired practical experience in communicating with foreigners at her university. In addition, she worked for one semester as a Mandarin teacher at Tangyuan Chinese House, a Chinese language training school in Ningbo, where she provided Chinese language lessons to foreign non-Chinese background learners who intended to do business with Chinese companies. During that period, the teacher researcher became fascinated with the cultural heritage and old traditions of China. Encounters with foreign students led to experiences of cultural differences which prompted her to find solutions to bridge the cultural gaps. Again this provided insight into how cultural differences might play out during the teaching and learning of Chinese in public schools in Australia. Language and cultural transfer became of significant interest.

Over fifteen years of learning English as a foreign language (EFL), the teacher researcher encountered many difficulties. The desire to seek a solution for each problem intensified her interest in language transfer as a useful strategy in learning a new language. This context influenced the teacher researcher's earlier thesis (for a bachelor's degree), which studied the language transfer of Chinese learners during English acquisition. This interest has again provided the context for the teacher researcher to undertake the study and research in this current Master's thesis, which has investigated language transfer to assist beginning learners of Chinese with their pronunciation.

## **1.4 Research Aims**

This research aimed to discover an effective and efficient way to teach Chinese language to young beginning L2 learners in Australian public schools. The first objective of this study was to identify the possible role of L1 (English) in L2 (Chinese/Mandarin) pronunciation learning for English-background learners. This has been an individual study and no implication has been suggested that second language teachers have any obligation to follow the strategies implemented in this research, nor that all students in Australia necessarily would encounter the same challenges in pronouncing the Chinese vocabulary listed herein.

## **1.5 Research Questions**

One strategy that has been observed in non-Chinese background beginner learners when they have attempted to memorize correct pronunciation, has been the phenomenon wherein learners have used phonetic symbols from their native language to assist their pronunciation of the target language. For example, when students learn the word “ni” (你 : you), they have been observed to write “knee” beside “ni”. This practice seemed useful for learners to read and remember the word. Hence, despite the fact that the Chinese language (a Sino-Tibetan language) differs from English (an Indo-European language), in terms of their language families, some relationships can be derived; that is, similarities have been observed between the two languages from the pronunciation perspective. Therefore, Chinese teachers may be able to use such relationships to develop teaching strategies to support their students’ learning.

The overarching research question for this study can therefore be stated as:

How can students' L1 (English) be employed to facilitate the pronunciation acquisition in their L2 (Chinese) learning?

In order to research this question, the contributory questions have been quantified as:

1. How does English (L1) relate to Chinese Mandarin (L2) in pronunciation, including both consonants and vowels, according to Ringbom's (2007) L1 and L2 relations (similarity, contrast, and zero)?
2. How do such L1 and L2 relations impact English-background Australian students' learning of Chinese language pronunciation?
3. What teaching strategies can be developed to facilitate the Chinese language learning for non-background Australian school students?

## **1.6 Significance and Value**

Language transfer has been a focus of interest in Second Language Acquisition studies for many years<sup>1</sup>. There have been many interpretations of language transfer. If comparisons between the learners' L1 and L2 have provided the focus, then challenges can likely be experienced by L2 learners. In addition, much of the available previous research has focussed on the language transfer for Chinese learners during their English acquisition. Not a lot of studies have examined the language transfer of English learners during their Chinese acquisition. Moreover, only a few studies have been conducted that analyze language transfer from the perspective of pronunciation. Thus, in order to explore language transfer in depth,

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<sup>1</sup> Chapter 2 has provided the literature review in relation to the points mentioned in this section.



this research has attempted to explore this gap in the research and has focussed on language transfer from the perspective of pronunciation.

The significance of undertaking this research has been to attempt to add to the available body of knowledge related to language transfer possibilities between English and Chinese/Mandarin for young beginning learners of Chinese/Mandarin in Australian schools. As this has been a study in one school across one year, there can be no claims of generalizability of the results beyond acknowledging the value of this case.

## **CHAPTER 2**

### **LITERATURE REVIEW**

An overview of the research literature has been provided in this chapter. The second section reviews key concepts and theories in the field of language transfer. The author has made a comparison between the English and Mandarin based on Ringbom's theory: similar, contrast, and zero relations. Phonetic similarities have been the major concern in this section. The teacher researcher utilized the similarities in pronunciations between the two languages to facilitate the learning of Mandarin. Finally, she also explored some current studies and major teaching strategies in TCFL, together with the importance of teaching Pinyin to beginners.

#### **2.1 Concepts and Theories in the Field of L1/L2 Transfer**

This section has covered current theories and key concepts related to language transfer and second language acquisition.

At its most fundamental level, a theory is a set of statements about natural phenomena that explains why these phenomena occur the way they do. The first duty of a theory is to account for or explain observed phenomena. But a theory ought to do more than that. A theory also ought to make

predictions about what would occur under specific conditions. (van Patten & Williams, 2014, p. 1)

A theory should not only account for and explain observed phenomena, but also predict possibilities. Theories of language acquisition also make predictions and explanations. They can work as guides when preparing teaching to help explain observed phenomena in class and can be tested through TCFL in an Australian school context. Given that current L1/L2 transfer theories are based on practice of the languages that belong to the same language branch or family (Indo-European), it is particularly important for the practice of L1/L2 involving two languages from different language families.

### **2.1.1 Definition of language transfer**

Researchers showed their various opinions about the definition of language transfer, which has been a central issue in second language acquisition (SLA) for at least a century. Linguists believe that the comparison of learners' L1 and L2 could reveal areas of difficulty for L2 learners. Defining language transfer is challenging given the different perspectives. Researchers have commented that behaviourist psychologists first defined "transfer" technically (Arabski, 2006; Dulay, 1982; Peukert, 2015). Transfer is "a term used in applied linguistics to refer to a process in foreign language learning whereby learners carry over what they already know about their first language to their performance in their new language" (Arabski, 2006, p. 12). It is suggested that by comparing the native language and target language, the difficulties in target language acquisition can be predicted (Yi, 2012). Odlin (1989) also linked the term to its psychological origin, which is a behavioural paradigm. However, language transfer is more than just a behavioural paradigm. Other language specialists viewed language

transfer as “the ability to extend what has been learnt in one context to new contexts” (Bransford, Brown, & Cocking, 2000, p. 51), which means the learners’ competence in applying the knowledge to new situations.

“Cross-linguistic influence” (Peukert, 2015, p. xviii) is another view about language transfer, which is not confined within the scope of L1 and L2. This is the influence resulting from similarities and differences between the target language and any other language that has been acquired (Yi, 2012). Learning a third language can also be influenced by learners’ L1 or L2. However, it does not account for how learning L2 is influenced by knowledge of L1.

### **2.1.2 How can L1 influence L2 learning?**

Behaviourist psychologists divide language transfer into two types: “negative” and “positive” (Dulay, 1982). During the process of negative transfer, old habitual behaviour is different from the new behaviour being learnt, which results in errors. For example, if a person has regularly driven a car where the gearshift is on the floor, he will invariably reach for the floor when first attempting to drive a new car where the gearshift is on the steering column. In contrast, positive transfer results in correct performance because the new behaviour is the same as the old. In the gearshift example, positive transfer would operate if the new car also had its gearshift on the floor—the old and new gearshifting would be the same. Both types of transfer refer to the automatic and subconscious use of old behaviour in new learning situations (Dulay, 1982).

In terms of language transfer, it can also result in correct language production (positive transfer) and incorrect language production (negative transfer). For example, the word “table” has the same meaning in both English and French. Those who know English

will acquire the French word table quickly. This is called positive transfer, which promotes the learning of L2. In contrast, the conjunction word “though” in English cannot be used together with conjunction “but”. When you use “though” in a sentence, for example, “The rooms, though small, [but] were pleasant and airy”, “but” is absent from this sentence, while in Mandarin, the conjunction “suiran . . . danshi” can and are always together (“suiran” means “though”, “danshi” means “but”). This sentence can be translated into “zhègèfángzi, suiran xiao, dānshi shūshì yòu tōngfēng”. When Chinese people learn English, they will translate this sentence to “The rooms, though small but pleasant and airy”. Therefore, this kind of phenomenon, which does harm to the learning of L2, is negative transfer.

### **2.1.3 L1/L2 compatibility/comparability**

When learning a foreign language, what important to learners is language proximity or similarities. Ringbom explained that there are three cross-linguistic similarity relations (language transfer): “similarity relation”, “contrast relation”, and “zero relation” (Ringbom, 2007, p. 5). When a pattern in L2 is perceived as formally and/or functionally similar to a pattern in L1, similar relation occurs (Ringbom, 2007). Ringbom explained this relation by taking English and German for example. The two languages are located on the same Germanic branch in the Indo–European language family. Learners who speak either language as their L1 can expect to have fewer difficulties when learning the other. Whitt (2008) also made comparison of some pronunciation similarities between English and German. He illustrated this with an example: German words such as *hören* and *fühlen* sound similar to their English counterparts “hear” and “feel”. He thus argued that sound similarities in the two languages can minimise the burden of learning.

In comparison, a contrast relation is perceived when L2 patterns differ in significant ways from an L1 patterns, though there is also an underlying similarity between them (Ringbom, 2007). English and French can provide examples of contrast relation. For instance, French and English both belong to Indo-European languages. However, French is within the Romance languages while English is Germanic. Learners are not expected to perceive or assume points of similarity between these two languages. Therefore, English speakers may encounter obstacles when acquiring French, but they may be able to recognize some contrast relation and use their knowledge of English (an understanding of linguistic functions) to learn French (Han, 2017).

Ringbom also said zero relation happens when patterns in the foreign language have little or no noticeable relations to learner's L1 at early stages of learning process. However, linguistic universals are common to all languages. The level of abstraction in these universals is so high that the average beginning language learner cannot easily notice features that an entirely different foreign language has in common with the L1 (Ringbom, 2007). Ringbom (2007) took English and Mandarin as an example of zero relation. He pointed out that these two languages belong to different language families: English is of the Indo-European family of languages, while Mandarin is of the Sino-Tibetan family of languages. A native English speaker will find it extremely difficult to relate anything from their previous linguistic knowledge when learning Mandarin (Ringbom, 2007). Other researchers also believe that Chinese and English vary greatly in the phonetic features of the written language. For example, English alphabets stand for phonemes directly, while each Chinese character represents one syllable with a specific tone (Wang & Dale, 2009). However, some researchers advocated that however different English and Mandarin might be, they do have some things in common, especially in phonetics. One of these researchers called Zhu (2017) explored

three types of phonetic similarities between Chinese and English: similar in pronunciation, borrowed and incorporated many words (loanwords) from each other, as shown in Table 2-1 (Zhu, 2017). 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 2-1. Phonetic Similarities Between Chinese and English**

Types of Similarity	English Words	Chinese Words
Similar pronunciation	wall	wǎ [I]
	knee	ní [you]
	eye	ai [love]
	toe	tóu [head]
	two	tù [rabbit]
Chinese words borrowed from English	chocolate	qiǎo kèlì
	sandwich	sān míng zhì
	coffee	kāfēi
	toast	tǔsī
	T-shirt	tìxù
	sofa	shā fā
English words borrowed from Chinese	dim sim	diǎn xīn
	tofu	dòu fu
	wonton	hún tūn
	chow	chǎo
	kung fu	gōng fu
	tai chi	tài jí

*Note.* Adapted from *An Exploration of Using Rhythm to Make Chinese Learnable: An Action Research Project in Western Sydney Primary Schools* (pp. 90–91) by X. Zhu, 2017. School of Education, Western Sydney University. Copyright (2016) by Western Sydney University. Adapted with permission.

There are various other examples, such as “lychee” from “lì zhī”, “bok choy” from “bái cài”, and “hoisin” from “hǎi xiān”. These three types of similarity enabled the

teacher researcher to start from students' present level, and then push them to levels of achievement that would have been beyond them without this support. Underpinning students' previous learning experience thus improves Mandarin learnability for them (Zhu, 2017). Therefore, it is predictable that English can be utilized to learn Mandarin. This thesis also presents some empirical cases. For example, learning Mandarin about family members "mā ma" (妈妈 mother) through sound similarity between the sound of [ma:] in English.

#### **2.1.4 Comparison of phonetic similarities in English and Mandarin**

Research suggests that a learner's first language influences the pronunciation of a foreign language (Zhang & Yin, 2009). Many beginning non-background learners have difficulties with the pronunciation of Mandarin (Pinyin) that have similar English counterparts, but which are actually different from each other. A particular sound that does not exist in English can therefore pose a difficulty for beginning Chinese second language learners to pronounce, and sometimes they manage to substitute those sounds with the most similar ones in their mother tongue. These sounds include both consonants and vowels.

In this section, a comparison of consonants and vowels, in Mandarin and English, respectively, are examined by using the concepts of three language transfer types—similar relation, contrast relation, and zero relation.

##### ***2.1.4.1 Similar relation of English and Mandarin***

According to Ringbom's (2007) theory, English and Mandarin belong to zero relation. However, the two languages have some similarities. Xu (2014) listed some examples of the same sounds that the two languages have. In Table 2-2, the left



column shows Pinyin, the phonetic system of Mandarin. The right column shows English words. The underlined part sounds the same as the Pinyin to its left.

**Table 2-2. Examples of the Sounds That Two Languages Share**

Mandarin Sound (Pinyin)	English Word
a	<u>a</u> h
e	w <u>o</u> rd
i	<u>e</u> asy
ai	<u>e</u> ye
ia	y <u>a</u> hoo
ei	m <u>a</u> y
ie	y <u>e</u> a <u>h</u>
b	<u>b</u> ee
p	p <u>o</u> lite
m	<u>m</u> ile
f	<u>f</u> ly
d	<u>d</u> ad
t	<u>t</u> ea
n	<u>n</u> ail
l	<u>l</u> ight
g	<u>g</u> irl
k	<u>k</u> ite
h	<u>h</u> igh
c	mo <u>m</u> ents
s	<u>s</u> nake

*Note.* Reproduced from *Connecting Australian Students' Prior Knowledge With Their Foreign Language Learning: A Beginning Mandarin Teacher's Exploration of Strategies Through Language Transfer* (p. 115), by Y. Xu, 2014, School of Education, University of Western Sydney. Copyright (2014) by Western Sydney University. Reproduced with permission.

Table 2-2 indicates Pinyin counterparts can be found in English. However, Pinyin and English letters are not one-to one correspondent. For example, single Pinyin vowel “e” similar to two English letters “o” and “r” in “word”; Pinyin compound consonants “ai” similar to English word “eye”. Therefore, this section explores the similar consonants and vowels of English and Mandarin systematically.

#### 2.1.4.1.1 Consonants

Pinyin sounds [sh] and [r] sound very similar to the English /ʃ/ and /ʒ/, respectively, but actually they are very different in terms of the place of articulation (for [sh] and /ʃ/) and the manner of articulation (for [r] and /ʒ/), but a large number of English speakers tend to replace the English /ʃ/ and /ʒ/ with the counterparts [sh] and [r] in Pinyin (Gavin, 2016; The Educational University of Hong Kong, 2014).

Mandarin sounds [sh], [ch], and [zh] are similar to /ʃ/, /tʃ/, and /dʒ/ in English. English /ʃ/ is a palato-alveolar fricative and /tʃ/ and /dʒ/ are palato-alveolar affricates; the former two are voiceless and the latter is voiced. However, the Mandarin [sh], [ch], and [zh] are palato-alveolar retroflex (i.e., the tip of the tongue is curled back against the palate when articulating these sounds), and all are voiceless. Mandarin speakers tend to replace /ʃ/, /tʃ/, and /dʒ/ with [sh], [ch], and [zh], respectively (The Educational University of Hong Kong, 2014).

Front nasal /n/ and /l/ exist in both English and Mandarin. However, the position of /l/ in Mandarin and English are quite different. In Mandarin, /l/ can only occur at the initial position, while in English it can be the initial, the middle, or the final position of the syllable (The Educational University of Hong Kong, 2014).

#### 2.1.4.1.2 Vowels

In Pinyin, there are 10 basic single vowel sounds and three kinds of finals (韵母 yùn mǔ) based on the 10 basic vowel sounds: 10 single finals (单韵母 dān yùn mǔ): a, o, e, i<sup>1</sup>, i<sup>2</sup> (after [zh], [ch], [sh], [r]), and i<sup>3</sup> (after [z], [c], [s]), ê, u, ü, er (retroflex compound which is made up of /e/ and a retroflex /r/); 13 two-/three-vowel compound

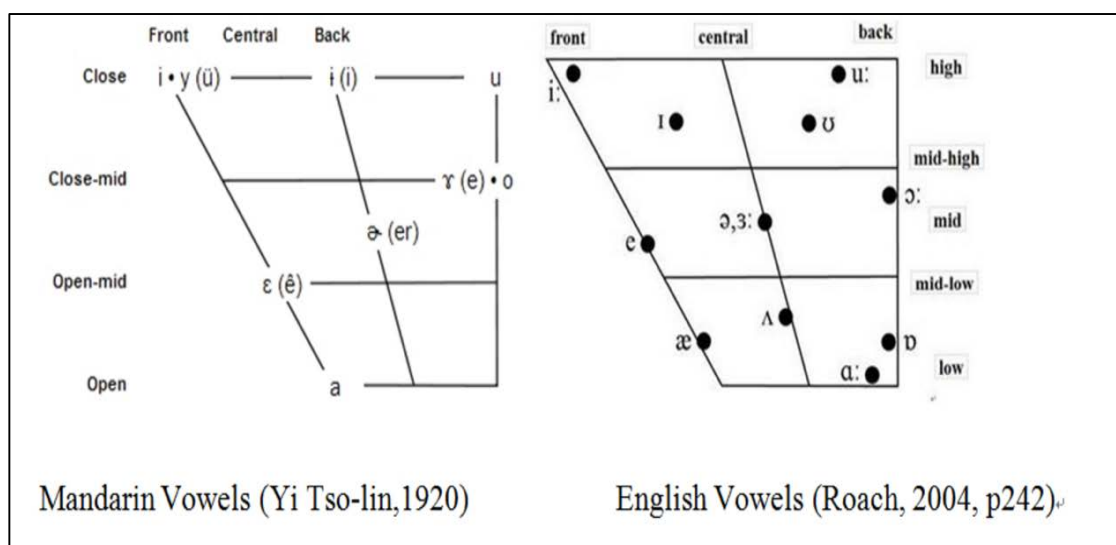
finals (复韵母 fù yùn mǔ): ai, ei, ui, ao, ou, iu, ia, ua, ie (iê), üe (üe), iao, iou, uai; 16

nasal compounds (鼻韵母 bí yùn mǔ ): an, ang, en, eng, ong, in, ing, ün, ian, iang,

iong, uan, uen, uang, ueng, üan (Huang, 2002; Hung, 1986; and Zhu, 2011, as cited in

The Educational University of Hong Kong, 2014; 汉语拼音方案, 1958)

Some of the Mandarin finals, which are not found in English, have similar correlates in English. From Figure 2-1, we can see that the [ê] sound in Mandarin sounds similar to /e/ and /æ/, but the position of [ê] is between /e/ and /æ/ (The Educational University of Hong Kong, 2014).



**Figure 2-1. Comparison between English and Mandarin vowel systems**

(Adapted from “Comparison of English and Mandarin (segmentals)” by The Educational University of Hong Kong, 2014). Adapted with permission.

#### ***2.1.4.2 Contrast relation of English and Mandarin***

On the contrary, Mandarin and English have contrast parts. This section displays the contrast relation of the two languages from the perspective of consonants and vowels.

##### ***2.1.4.2.1 Consonants***

In English, the consonants /b, d, g/ are voiced, while in Mandarin, only the voiceless versions of them (i.e., /p, t, k/) exist. In English, the core differences between /p/ and /b/ are voice and aspiration, but in Mandarin, both /p/ and /b/ are voiceless sounds, and they mainly differ in aspiration (The Educational University of Hong Kong, 2014).

For example:

[d] in 大 [dà] → /d/ in duck /dʌk/

[b] in 爸 [bà] → /b/ in but /bʌt/

In Pinyin, syllables usually end with a vowel sound. However, there are exceptions—only two consonant sounds (i.e., back nasal /ŋ/ and front nasal /n/) can appear at the end of syllables, while in English, there is no rule like this. Therefore, many Mandarin speakers either omit the final consonant or add an extra vowel at the end of the word (The Educational University of Hong Kong, 2014).

##### ***2.1.4.2.2 Vowels***

Compared with English diphthongs like /əʊ/, /aɪ/, and /eɪ/, Mandarin compound finals tend to be pronounced with quicker and smaller lip and tongue movements (The Educational University of Hong Kong, 2014). Therefore, it is harder for non-background Chinese learners to pronounce Mandarin compound finals.

### 2.1.4.3 Zero relation of English and Mandarin

Apart from similar relation and contrast relation, Mandarin and English also have zero relation.

#### 2.1.4.3.1 Consonants

Figure 2-2 shows Mandarin and English consonants displayed by articulatory manner (row) and place (column). Blue items in the Mandarin panel stand for sounds that do not occur in English, while the sounds in red mean sounds that exist in English but are absent in Mandarin.

		Place of Articulation								
			Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar/ Alveolar-palatal	Palatal	Velar	Glottal
Manner of Articulation	Plosive	E	p <sup>h</sup> b (voiced)			t <sup>h</sup> d (voiced)			k <sup>h</sup> g (voiced)	
		M	p <sup>h</sup> p (voiceless)			t <sup>h</sup> t (voiceless)			k <sup>h</sup> k (voiceless)	
	Fricative	E		f v	θ ð	s z	ʃ ʒ			h
		M		f	s		ʒ (retroflex)	ç	x	
	Affricate	E					tʃ dʒ			
		M			ts <sup>h</sup> ts		tʃ <sup>h</sup> tʃ <sup>h</sup> (retroflex)	tɕ <sup>h</sup> tɕ <sup>h</sup>		
	Nasal	E	m			n			ŋ	
		M	m			n			ŋ	
	Lateral approximant	E				l				
		M				l				
	Approximant	E	w				r <sup>h</sup> (retroflex with slight lip rounding)	j		
		M	w				ʒ <sup>h</sup> (retroflex without lip rounding)			

**Notes:**

- E=English, M=Mandarin. All the symbols in this table are IPA symbols.
- Blue ones in the Chinese panel denote sounds that do not occur in English, while the sounds in red represent sounds that occur in English but are absent in Chinese.
- Duanmu S. (2000). *The Phonology of Standard Chinese*. Oxford: Oxford University Press.

**Figure 2-2. Comparison of Mandarin and English consonants.**

(From “Comparison of English and Mandarin (segmentals)” by The Educational University of Hong Kong, 2014). Reproduced with permission.

According to Figure 2-2, the following phonemes in Mandarin are not found in English (/p/, /t/, /k/, /s/, /ʃ/, /ç/, /x/, /ts/, /tʂ/, /tɕ/, /z/). Likewise, the Mandarin represented by “x-”, “q-”, and “j-” in Pinyin do not exist in English, which contributes to numerous difficulties for beginning Chinese learners.

Consonant clusters are commonly used in English. They can be at the initial, medial, or final position of a word, and they can consist of a cluster of two or more consonants, for example, black /blæk/, spring /sprɪŋ/, must /mʌst/, and text /tekst/. The word text /teksts/ has a final blend of four consonants. However, initial and final consonant clusters are never found in Mandarin (The Educational University of Hong Kong, 2014).

#### *2.1.4.3.2 Vowels*

Similarly, some vowels do not exist across the two languages. The length contrast between long and short vowels in English does not exist in Mandarin, like “ship” and “sheep” (/i:/ and /I/) and “full” and “fool” (/u:/ and /U/) (The Educational University of Hong Kong, 2014).

#### ***2.1.4.4 Phonetic loans in Mandarin***

As well as the comparison of the phonetic similarities between Mandarin and English based on each vowel and consonant, another type of similarity exists in loanwords. There are four types of loanword in Mandarin, namely, phonetic loans, semantic loans, graphic loans, and hybrid loans (Miao, Broselow, & Repetti, 2005), of which phonetic loans were the major concern of this study. Phonemic loans are known in Mandarin as “yīn yì cí” (音译词 sound-transliteration words). They are adapted through phonemic/phonetic transliteration, with the Mandarin pronunciation deriving from the

pronunciation of the foreign source form. Phonemic loans can be further divided into two categories: “purely phonemic loans” and “phonemic loans with semantic association” (Miao et al., 2005, p. 29). Researchers had set up a collaborative project called the Loanword Typology (LWT) project, with Mandarin included (Wiebusch & Tadmor, 2009). For loanwords in Mandarin, researchers explored its history and the classifications. In general, loanwords entering Mandarin before the Han Dynasty (206 BCE to 220 CE) are by now so highly integrated that even expert linguists are still debating about their status (Thekla & Uri, 2009).

The phonological differences between English and Mandarin are related to this study. For instance, Mandarin adaptation of foreign consonants and consonant clusters reflect mainly on two aspects. One concerns the contrastive features of consonants. In English, consonants contrast in voice, with distinctions between voiced and voiceless sounds. Voiceless plosives in English have allophonic variation between an aspirated and unaspirated sound. The aspirated allophone occurs at the initial position of a word or a stressed syllabic, for example, /p/ in English “pat” [pæt] and “repeat” [ri'pi:t]. The unaspirated sound occurs elsewhere, for example, as the second element in a word initial cluster as in “spat” [spæt] and as the final element of a word as in the English “tap” [tæp]. Mandarin consonants contrast in aspiration but not in voice, with distinctions between aspirated voiceless and unaspirated voiceless phonemes. The consonantal phonemes in English are listed in Table 2-3. In Table 2-3, only IPA (International Phonetic Alphabet) symbols are displayed. The orthographic letters representing each English consonant are omitted since there is not always a one-to-one mapping between letter and phoneme (Miao et al., 2005).

**Table 2-3. Inventory of English Consonants**

	Labial	Labio-dental	Dental	Alveolar	Palato-alveolar	Velar	Glottal
Plosive	p b			t d		k g	
Nasal	m			n		ŋ	
Fricative		f v	θ ð	s z	ʃ ʒ		h
Affricate					tʃ dʒ		
Liquid				r l			
Glide	w				j		

*Note.* Reproduced from *Connecting Australian Students' Prior Knowledge With Their Foreign Language Learning: A Beginning Mandarin Teacher's Exploration of Strategies Through Language Transfer*, by Y. Xu, 2014, p. 115, School of Education, University of Western Sydney. Copyright (2014) by Western Sydney University. Reproduced with permission.

Based on these differences, it is predicted that when English words are adapted into Mandarin, the voicing contrast between consonants (/b/, /d/, /g/ are voiced, while /p/, /t/, /k/ are voiceless) in English will be mapped to the aspiration contrast in Mandarin; for example, in English, the core differences between /p/ and /b/ are voicing and aspiration, but in Mandarin, both /p/ and /b/ are voiceless sounds. Examinations of the phoneme substitution patterns show that generally, a voiceless consonant in a source word is replaced by an aspirated phoneme in Mandarin, and a voiced consonant is replaced by an unaspirated phoneme (Miao et al., 2005).

In the process of segmental mapping from English to Mandarin, the general rule is that a foreign phoneme, if not deleted, will be matched to the closest phoneme available in the Mandarin inventory. For instance, an English voiceless bilabial plosive /p/ may be replaced by a Mandarin aspirated bilabial plosive /p/ (Miao et al., 2005).



### **2.1.5 Summary**

This section focused on some current theories and key concepts of language transfer and SLA. According to Ringbom's (2007) language transfer relation theory, only languages (English, French, and German) that belong to the same language branch or family (Indo-European) are analysed. He claimed that Mandarin (Sino-Tibetan language family) and English belong to two different language families. A native English speaker will find it extremely difficult to relate anything from his previous linguistic knowledge when learning Mandarin. It is true and that is why the phonetic similarities based on vowels and consonants in the two languages were also explored in this section. The author of this study tries to find these phonetic similarities in order to facilitate the learning of Mandarin. Based on the literature review, the similar relation between English and Mandarin can be divided into several categories: similarities of vowels and consonants, Chinese words borrowed from English, English words borrowed from Chinese, purely phonetic loans and phonetic loans with semantic associations. It can be assumed that native English speakers will find it easy to learn Mandarin that has similar relation with English. However, except similar relation, there are contrast and zero relation between the two languages, which needed further and deeper explorations.

## **2.2 Current Studies in Teaching Chinese as a Foreign Language**

Many researchers have explored the field of TCFL. At present, the term regarding the education of Chinese to non-native speakers in China is “对外汉语教学” (duìwài Hànyǔ jiàoxué: “duìwài” means “to foreign”, “Hànyǔ” stands for “Chinese language”, and “jiàoxué” means teaching, DHJ), which has been interpreted as “teaching of

Chinese as a foreign language (TCFL)” or “the teaching of Chinese as a second language (TCSL)” (Ruan, Zhang, & Leung, 2016, p. ix). The terms TCFL and TCSL are different. TCFL refers to teaching Chinese to students whose first language is not Chinese and teaching them in contexts in which Chinese is not necessarily used, for example, learning Chinese in the United States outside of Chinese communities. TCSL relates to teaching Chinese to students whose first language is not Chinese and teaching them in contexts in which Chinese may be the primary language, for instance, going to Tsinghua in Beijing and studying Chinese. In recent years, the term TCFL has been also referred to as international Chinese language education. However, in the context of this research, the term TCFL is used.

TCFL has a long history with its difficulties. Teaching foreigners the language of Chinese began at Tsinghua University in the 1950s (Ruan et al., 2016; Tsung & Cruickshank, 2010), which could be regarded as a foundation stone of Chinese language teaching and learning. However, it was not until the Open Door Policy adopted by China that TCFL was revived again (Ruan et al., 2016). Currently, with the increasing impact of China in the world, Chinese is being learnt by a growing number of foreigners to gain access to people in China, which has created a “Chinese fever” worldwide (Chen, 2015; Scrimgeour, 2014) or “Chinese heat” (The Office of Chinese Language Council International, 2007).

### **2.3 Challenge of TCFL in Australia**

Although TCFL is promoted and supported by Australian government (Asia literary, ACARA, etc.), students’ dropout rate is high. One of the problems is little development of research-based Chinese language teaching pedagogy that can be practically used in Australian primary schools. TCFL is still under development and faces a variety of

challenges, such as transformation from research to practice and a lack of qualified teachers.

### **2.3.1 Transformation from research to practice**

Cummins (2008) argued that the challenge of TCFL is to provide experience that is both context embedded and cognitively demanding (Cummins, 2008; Genesee, 1994). Similarly, Zhao (2009) reported the status of DHJ in China from the perspectives of research and teaching. On the current, neither scientific, systematic, and standard national Mandarin proficiency criteria nor teaching syllabuses have been developed (Han, 2017). The research scope into DHJ is narrow and unbalanced. Research studies have not been purposely designed and lack nationally and internationally significant projects. Moreover, teaching pedagogy has been reported at a more general level rather than specific and in-depth studies. Some key areas, such as vocabulary teaching pedagogy, continue to remain within this wide research gap (Han, 2017).

### **2.3.2 Lack of qualified teachers**

The main challenge of TCFL also includes the lack of qualified DHJ teachers in Australia. Foreign teachers in Australia are mainly ethnic Chinese (for example, 90%). They have attained permanent residency after an immigration waiver in 1989 (Orton, 2016). However, the employment of native Chinese speakers has expanded the number of available teachers in schools. Orton (2008, 2016) contended that it is a major challenge to effective Chinese learning outcome because of the varied range of teaching skills. Mastering a foreign language and being able to speak a language does not necessarily equal to effective teaching and learning; an understanding of the literacy aspects of a language and teaching pedagogies are not innate to these native Chinese language speakers.

Most TCFL teachers in Australia can be regarded as “beginning teachers”. Beginning teachers refers to “those who are still undergoing training, who have just completed their training, or who have just commenced teaching and still have little (e.g. less than two years) experience behind them” (Xu & Liu, 2016, p. 25). According to the Committee for the Review of Teaching and Teacher Education, “25% to 30% of beginning teachers left their position within the first three years, and the number surged to 50% after five years” (Xu & Liu, 2016, p. 26). The high rate of withdrawal therefore widens the gap in the number of qualified teachers.

## **2.4 Teaching Strategies That Have Been Developed in the TCFL Classroom**

Researchers have explored various teaching strategies in the TCFL classroom, which include strategies using cross-linguistic similarities and other supplementary strategies such as learning environment, contextual learning, social media, visual–oral strategy, gesture–oral strategy, and the rhythm-based teaching strategy.

### **2.4.1 Cross-linguistic similarities in pronunciation**

Zhang (2015) explored similarities between Chinese and English when teaching Pinyin in her class. She made a conclusion that there are four main features of this kind of phonetic similarities: “transfer of learner-designed body movements to Chinese tonal words, transfer ‘Australian *Pinyin*’ to Chinese *Pinyin*, transfer English vocabulary decoding strategies to Chinese vocabulary learning, and transfer previously learnt Chinese vocabulary to newly acquired Chinese vocabulary” (Zhang, 2015, p. 45, emphasis in original).

#### ***2.4.1.1 Transfer of learner-designed body movements to Chinese tonal words***

Pinyin “ma” adopted as an example by Zhang(2015). It has four tones, which are difficult for students to learn for its absent in English. She explained the different meanings of “ma” in each different four tones, with intensive oral practice by following her instruction and repetition. However, the result was not satisfactory. After adjustment, she designed instructions involving not only oral repetitions but also body movements and hand gestures using the four tones, which turned out to be very helpful. The body movements together with hand gestures engaged students well, and students even designed their own version of body movements to learn Pinyin (Zhang, 2015).

#### ***2.4.1.2 Transfer of “Australian Pinyin” to Chinese Pinyin***

Zhang (2015) linked every vowel in Chinese Pinyin to a specific English word with similar pronunciations. In one specific class, at the very beginning, she explained the sound similarities between Chinese vowels and English vowels, and then guided students to pronounce the Pinyin. The students’ patience and attention to the Pinyin pronunciation reflect the success of this teaching strategy. They posed no resistance to this kind of transfer.

#### ***2.4.1.3 Transfer of English vocabulary decoding strategies to Chinese vocabulary learning***

“Decoding” means looking for an English word that is associated with the target Chinese word in pronunciation. Stories and reasonable explanations are also provided to make connection between the two languages (Zhang, 2015). Zhang also gave vivid examples to explain this teaching strategy in detail in her Mandarin lessons. However, decoding was not easy which need to consider how related the stories were and the

limitation of students' literacy level. Some students might not understand the connection made by teacher. Therefore, this teaching strategy needs other supplementary teaching strategies.

#### ***2.4.1.4 Transfer of previously learnt Chinese vocabulary to newly acquired Chinese vocabulary***

Zhang (2015) emphasised the mastering of basic but productive vocabulary in Chinese lessons. These vocabularies refer to Chinese numbers, colours, and commonly used adjectives. Then, she inspired students to make a story related to the characteristics of newly acquired words to assist them in transferring already learnt Chinese numbers to new words. There are so many examples listed in her research. However, researchers should take into consideration that this teaching strategy should not increase students' cognitive load as they might not learn so many Chinese words in one Chinese lesson. Therefore, other supplementary teaching strategies are necessary.

#### **2.4.2 Physical learning environment**

The physical environment of school includes "buildings, classroom furniture, equipment, instructional material, laboratories, libraries, and playgrounds" (Asiyai, 2014, p. 717). For students to learn effectively and meaningfully, their perception about the physical condition of the classroom matters a lot. The impression students have about the condition of their physical learning environment has a great influence on their academic achievement and their attitude towards learning and schooling (Asiyai, 2014). To facilitate students' learning, Asiyai recommended that the government design strategies to seek community involvement of the provision of classroom facilities, for example, desks and seats; principals and teachers should also create a favourable physical learning environment in school. Fortunately, researchers

have started to develop measures to assess the relative quality of the classroom environment. Take early child care for example, in Australia, researchers have developed the Early Childhood Physical Environment Rating Scale, designed to assess the quality of the physical environment of early childhood centres considering their potential for child development and learning (Berris & Miller, 2011).

### **2.4.3 Contextualised vocabulary learning**

It is widely believed that context-based learning provides L2 learners with a direct link between L2 word forms and the underlying concept, thus could facilitate L2 word learning (Lan, Fang, Legault, & Li, 2015). Researches in both Chinese and English language learning have shown that vocabulary competency is a core indicator of language competency (Wong, King, Chai, & Liu, 2016). The increasingly focus on vocabulary requires language educators to clearly articulate what is the meaning of knowing a word, and how to emphasize the meaning of receptive (listening and reading) or productive (speaking and writing) knowledge of vocabulary pedagogically. Channell defined L2 vocabulary acquisition as (1) the meaning of an L2 word can be recognised and understood both in and out of (relevant real-world) contexts, and (2) it can be used naturally and appropriately in various situations (Channell, 1988, cited in Wong et al. 2016). Channell's definition underlined the importance of moving beyond the behaviourist's wordlist memorisation and drills (Wong et al., 2016). Such learning strategies may lead to a great deal of words to be memorised efficiently, however, they have little to provide in achieving the major language learning goal of expressing oneself in a wide range of communicative situations (Wong et al., 2016). This has led researchers to shift their attention to learning from the context in which the target word is embedded.

#### **2.4.4 Social media in language learning**

Social media became as a new social space in recent years. It is used increasingly for supporting students' communicative and creative endeavours (Wong et al., 2016). Social media has the ability to enhance language learning for two reasons. First, social media make it possible to offering a large place where language practice take out of the classroom. Second, Social networks helps language learning in more authentic social contexts. Both two reasons are critical for authentic language learning where language is learnt via socialisation and utilisation (Wong et al., 2016). Therefore, "social media could provide affordances to design a seamless integration between classroom-based guided participation and autonomous, socialised learning in the students' daily life" (Wong et al., 2016, p. 403, enhance for its original).

#### **2.4.5 Visual–oral Strategy**

The visual–oral strategy refers to a teaching strategy which contains pictures. Shi employed this strategy in his class to engage students and develop their skills in Mandarin (Shi, 2017). When delivering a Mandarin lesson about colours, he explained in detail about how the visual mode and oral mode were integrated in this visual–oral strategy. Students were provided with a colourful picture with familiar elements they have acquired at previous lessons, which was in the visual mode. Their pronouncing of colours in Mandarin in response to the teacher's questions belonged to the oral mode. Students found the colours in the picture and pronounced them in Mandarin. In this way, they were stimulated by both the visual mode and oral mode (Shi, 2017). The visual mode enable students to understand the meaning of words without a large number of translation. Shi concluded the effectiveness of this strategy based on students' feedback, his own reflective journal, and observation notes. The visual–oral



strategy, “Tell Me the Colour of . . .” was considered effective in engaging students to practice Mandarin. The combination of bright and contrast colours gave rise to students’ emotional arousal and motivated their attention. However, the limitations of this strategy should not be ignored. There were other reasons why students were interested in this visual–oral strategy, which requires further study.

#### **2.4.6 Gesture–oral strategy**

The gesture–oral strategy is defined as a teaching strategy that combines gestures (both the teacher’s and students’) with students’ oral language in the teacher researcher’s class (Shi, 2017). Students were required to show gestures while they pronounced Mandarin. Shi adopted this strategy as one of the gesture-based multimodal strategies in his class when teaching Mandarin tones. “Finger Dance We Pronounce” was designed in his class to engage students in learning. Data were also generated from the teacher–researcher’s lesson plans, observation notes, and reflective journal to illustrate the effectiveness of this strategy. Students were required to draw the sign of the Chinese tones while pronouncing the words. Drawing the sign in the air was gesture mode and their pronunciation was oral mode. Therefore, in this gesture–oral strategy, both modes were used to engage students. He concluded that the combination of gesture and oral modes in this way was helpful in promoting students’ engagement, as well as in grasping the exact pronunciation. The gesture–oral strategy met students’ need of autonomy and triggered students’ interest by body movement.

#### **2.4.7 Rhythm-based teaching strategy**

Engl (2013) argued that the most favourable learning occurs in low anxiety, self-confidence, and high-motivation settings. Music lowers affective barriers and assists in making students more relaxed and therefore more receptive to language learning.

Both Zhu (2017) and Engh (2013) held the view that rhythm makes students relaxed and confident at the before-class stage. Zhu designed two songs, “Greeting Song” and “Finger Family Song”, to teach the Mandarin of greetings and family members. She also collected data from her reflective journal and observation notes to test the effectiveness of the rhythm-based teaching strategy. Data reflected that nursery rhythms enhance students’ vocabulary and language development, accelerate phonetic awareness, and increase confidence and courage in language learning. The employment of the Greeting Song and the Finger Family Song in the class made students relaxed and confident in learning the new language (Zhu, 2017).

## **2.5 Importance of Pinyin in the Teaching of Young Students**

In the early 1950s, researches about the influence of age on foreign language teaching were developing. In 1959, neurophysiologists Penfield and Roberts (cited in Qiong, 2014) suggested that “ten years old” was the best age for learning language. After that, Eric Lenneberg of the Harvard University Medical School explained that there is a critical period of language learning, that is, during the age of two to thirteen, which he called the “critical period for language acquisition” (Eric Lenneberg, cited in Qiong, 2014, p. 76). However, this critical period for language learning is only for learners’ L1 acquisition. Many researchers question whether the hypothesis of a critical period of language acquisition is suitable for second language learning.

Shi Chun Gui (1985, cited in Li, 2014) pointed out, it is very difficult to give an exact answer as to the optimal age of learning a foreign language, and we cannot simply draw a conclusion about whether there is a critical period. Instead, we study the characteristics of learning at different stages and then apply it to teaching in an all-round way.

Therefore, age has an effect on the learning and teaching of foreign language. On the other hand, age is not the decisive factor: physical, psychological, cognition, emotion, motivation, and many other factors should also be considered thoroughly. We should study the characteristics of language learning at different stages and apply it to practical language teaching.

The target students of this research were aged 6 and 7. Primary school children had just started to learn how to write and had limited written language ability, but their oral learning and memory ability were very strong. Therefore, the aim of foreign language learning for children is to cultivate children's oral communicative competence (Xu & Liu, 2016). To learn Chinese, foreign learners need to learn three aspects of Chinese characters: Pinyin, the writing form, and the meaning (Ye, 2013). In the TCFL classroom of the primary school, especially for lower levels, Chinese language presented each session usually refers to Pinyin, new words, text/dialogue, and Chinese characters (Chen, 2014). Therefore, it is important to learn Pinyin at the first stage. Since 1958, foreign learners have found it useful to learn to speak MSC utilising the Pinyin. Currently, Pinyin is popular among Mandarin teachers when teaching Chinese to foreign students. The success of Pinyin overseas can be partially attributed to the similarities between Pinyin and English letters, which makes it much easier for students who have already acquired English not only to commit the Chinese phonetic symbols to memory, but also to type Chinese text into English-enabled computers (Odinye, 2015). The similarities between Chinese and English exist not only in the appearance of the letters but also in the pronunciations.

The emphasis on the role of oral language in oral Chinese language teaching is not necessarily to ignore the teaching of Chinese characters. As long as we correctly understand the relationship between the Chinese phonetic alphabet and Chinese

character teaching in theory, the ultimate goal of teaching Chinese to children, we could learn Mandarin in a better way.

## **2.6 Conclusion**

This chapter displays definitions and typologies of language transfer, and studies on language transfer theory. It is the theoretical context of this study, whose core focus is the relations between Mandarin and English. There are also many teaching strategies developed in teaching Chinese as a foreign language class, which include a friendly learning environment, contextual learning, visual–oral strategy, gesture–oral strategy, rhythm-based teaching strategy, et.al.. However, little researches and studies have been conducted on explicit explanations of the relations between Mandarin and English, not to mention efficient teaching strategies related to facilitate native English speakers' acquirement of Mandarin. Some Chinese experts who have learnt English very well explored various similar vowels and consonants between Mandarin and English from the perspective of native Chinese speakers in a complicated way. For example, an English voiceless bilabial plosive /p/ may be replaced by a Mandarin aspirated bilabial plosive /p/ (Miao et al., 2005). Mandarin beginners don't have to know the terms such as voiceless bilabial plosive or aspirated bilabial plosive. As beginning learners studying a totally new language in the early process of learning, it is unrealistic for them to pronounce Mandarin as accurate as native Mandarin speakers. Even some China born native speakers could not reach to Modern Standard Chinese with dialectal accent. Therefore, rather offering a guideline for them to speak Mandarin as accurate as native broadcast hosts, this research tried to strengthen non-background Mandarin beginners' awareness of using their L1, English knowledge to learn Mandarin. It is also necessary to research the similarities between Mandarin and

English and how they impact teaching. Besides, though some Mandarin are absent in English, practical teaching strategies were still explored in this research.

This study emphasised the employment of a language transfer teaching strategy to make Chinese learnable as a foreign language. Based on Ringbom's (2007) theory, similar, contrast, and zero relations between the two languages were the three main stages of the study. Several schools in the Western Sydney region have engaged in the ROSETE program, enabling the author to conduct this research. This study also aimed to develop a practical pronunciation framework for Stage 1 students in NSW public schools in accordance with the Chinese curriculums, which focuses on speaking one of the Asian languages, including Chinese Mandarin.

## **CHAPTER 3**

### **METHODOLOGY**

This chapter outlines the methodology and methods used in this research. It will begin with a discussion of the chosen research paradigm and the processes of adopting action research. Next, the design of this research is described in detail by site selection and participants. The chapter then has detailed the data collection methods together with principles guiding this research.

#### **3.1 Research Paradigm**

Qualitative research is “oriented toward analysing concrete cases in their temporal and local particularity and starting from people’s expressions and activities in their local contexts” (Flick, 2009, p. 21). With the help of qualitative research, researchers could find or develop evidence-based theorising to achieve validity through reference to the study rather than through abstract academic criteria as occurs in quantitative research (Flick, 2009).

What matters in qualitative research is that the field-related knowledge and practices might be different due to the various subjective perspectives and social backgrounds where practices are situated (Flick, 2009).

Qualitative methods include researcher's communication with participants, which is an indispensable part of the knowledge. "the subjectivity of the researcher and of those being studied becomes part of the research process" (Flick, 2009, p. 22). Researchers reflect on their actions and observations in the field, their impressions and feelings, which become data, documented in research observation notes, a self-reflection journal, or other context protocols (Flick, 2009). Therefore, the subjectivity of the qualitative research is inevitable.

In comparison, the quantitative method is widely applied in natural sciences and takes the object studied under controlled circumstances (Flick, 2009). For example, if you want to study the impact of age on learning a second foreign language, other factors such as gender, family environment, and so on should be controlled in case of influencing the results. Different from quantitative research, which is based on the "precise definition, measurement, and analysis of the relationship between a carefully defined set of variables", action research begins with "a question, problem, or issue that is rather broadly defined" (Stringer, 2013, p. 19). Stringer gave a clear distinction between quantitative research and qualitative research. However, this does not mean that quantitative information must be excluded from this research. The reason is that it often gives important information, which is part of the body of knowledge and that needs to be incorporated into the study. "This information can be included in the processes of meaning making that are essential to action research, but it does not form the central core of the processes of investigation" (Stringer, 2013, p. 19).

### **3.2 Action Research**

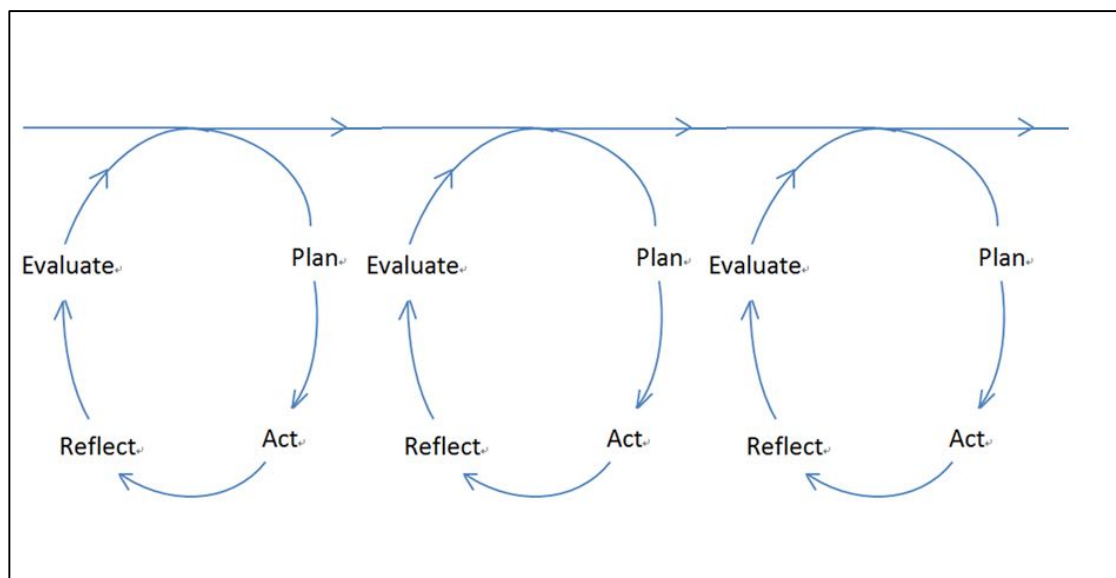
Action research, which belongs to qualitative research, aims to gather greater clarity and understanding of a question, problem, or issue (Stringer, 2013).

### 3.2.1 Definitions

Action research is a form of qualitative research, a systematic approach to investigation that enables people to find effective solutions to problems they encounter in their everyday lives (Stringer, 2007). It is a cooperative approach to research that offers participant researchers the means by which to take systematic action to solve specific problems they confront in their public and professional lives (Stringer, 2007).

### 3.2.2 Cycle implementation

The basic action research procedure provides participant researchers with a simple but powerful framework that involves looking, thinking, and acting, which enables them to conduct research that builds greater detail into procedures as the difficulty and complexity of an issue increases (Stringer, 2007). Action research consists of a spiral of activity: plan, act, reflect, and evaluate (see Figure 3-1).



**Figure 3-1. Action research interacting spiral**  
(Reproduced with permission from Stringer, 2007, p. 8).



The “plan, act, reflect, and evaluate” routine is but one of a number of ways in which action research is envisaged. Another diagrammatical mode of action research is “plan, act, observe, reflect” (Altrichter, Kemmis, McTaggart, & Zuber-Skerritt, 2002). It is a simple but helpful mode of the continuous and interactive process. Although the process that Altrichter et al. demonstrated is similar, they are the same set of activities. Therefore, in this study, processes are selected to fit their own situation.

The study is designed in three cycles. Each cycle is one school term (10 periods) and include four steps: planning, teaching implementation, observation and reflection, and evaluation.

**Planning:** This stage of the process requires teacher researchers to gather information about participants’ experiences and perspectives and to define the issue in terms of making sense in their own terms (Stringer, 2007). The teacher researcher planned the teaching based on the knowledge learnt through literature. Ringbom’s (2007) three language transfer relations, together with the similarities of the consonants in both Chinese and English as a framework, were used to design lessons and decide what to teach. For example, the Pinyin [r] sound is very similar to the English /ʒ/, so “ròu” (which means “meat” in English) is easy for learners to pronounce. From this planning, a lesson was designed on the topic “food” involving various meats to teach the Pinyin [r] sound effectively.

**Observation and reflection:** The task of this stage is to identify the aspects of information that can assist a teacher researcher in clarifying and understanding the nature of the activities and events she is investigating. “Analysis may be envisaged as a process of reflection providing participants with new ways of thinking about the

issues and events investigated” (Stringer, 2007, p. 66 ). In this stage, she analysed the performance of her students, including their worksheets, and wrote field notes.

**Teaching implementation:** “In this phase of action research, participants worked creatively to formulate actions that lead to a resolution of the problems” (Stringer, 2007, p. 125). Teaching these similar consonants and vowels involved various teaching strategies. She tried a series of strategies to see which worked and which had more influence on pronunciation. This “acting” provided data on which strategies should be adopted that enabled the achievement of better results for the students. For example, if the teacher researcher used teaching strategies such as modelling, guessing with hint, or peer discussion, she would gather information about which strategies led to the desired outcomes.

**Evaluation:** At this stage, the teacher researcher reflected and evaluated the teaching strategies and prepared revised strategies for the next cycle of teaching and research. She also collected information from students and classroom teachers about her teaching strategies, including how these strategies did or did not assist students to learn the language.

In summary, through action research, the teacher researcher first observed the similarities and differences between Chinese and English pronunciation, then took action to analyse the similarities by comparing the two languages in certain vowels and consonants pronounced by non-Chinese-background learners of Chinese. Finally, from completing a reflective journal and other feedback, revision of teaching activities occurred to identify the possibilities of pronouncing Chinese in a more consistent way.

### **3.3 Research Design**

#### **3.3.1 Site selection**

The research will be conducted in a public school located in the Western Sydney Region (WSR). All the student participants speak English as their L1 without L2 background. However, this school has been participating in the ROSETE program since 2013. The school has a strong Mandarin focus where every class, from kindergarten to year 6, is learning Mandarin for about 45 minutes every Tuesday. The teacher researcher began her Mandarin teaching at this school in February in 2017 and will continue until December in 2017, which including four terms.

#### **3.3.2 Participants**

The participants for this study include the teacher-researcher, student participants and classroom teacher.

##### ***3.3.2.1 Teacher-researcher***

The teacher-researcher begins this research by investigating her own teaching practices, including undertaking action research and writing reflective journals which include evaluations of classroom teachers and teaching strategies. During observation, teacher-researcher is the one who take field notes and collect anecdotal comments made by students and classroom teachers.

##### ***3.3.2.2 Student participants***

The student participants were the students of the teacher researcher's class. They were non-Chinese background public school students in stage one. Their first language was English and their Mandarin, the L2, at the beginners' level. Although they are

Anglophones with very basic L2 knowledge, they may have had some exposure to Mandarin than those in other schools because of the bilingual program in the school. For example, if the students see an Asian face at school, they would greet the person in Mandarin. A few of them have shown a strong interest in speaking Mandarin. When they meet Mandarin teachers, they speak to them about what they learnt in class. However, they are not fluent Mandarin or bilingual speakers. In a word, the student participants are Anglophones learning Mandarin as a foreign language.

### ***3.3.2.3 Teacher participants***

There are two teachers who will be included in this research. One is classroom teachers of teacher-researcher's Mandarin class and another one is teacher-researcher's mentor teacher. The classroom teacher's role is supervising the Mandarin class and helping with classroom management. The classroom teacher does not have knowledge of the Mandarin. However, she has rich pedagogical knowledge. According to the agreement signed between the three partners (NSWDE, WSU, NMEB) ROSETE program (Singh, 2013, pp.8-9), they act as mentoring teachers and will provide feedbacks on the teacher-researcher's teaching through interview. Therefore, in this research, mentor teacher refers to classroom teacher.

## **3.4 Data Collection Methods**

Data collection involves classroom teachers' evaluation and feedback during teacher interview; student reflection on learning in students group interviews; participant observation and reflective journals.

### **3.4.1 Interview**

An interview is defined as “a process in which a researcher and participant engage in a conversation focused on questions related to a research design” (DeMarrais, 2004, p.55 as cited in Merriam & Tisdell, 2015, p.87). Interviewing is a necessity when we cannot observe behavior, feelings, or how people interpret the world around them.

This research includes classroom teacher interview and students group interviews.

#### ***3.4.1.1 Classroom teacher interview***

Classroom teacher interview is designed as a semi structured interview in this research. This type of interview either all of the questions are more flexibly worded or the interview is a mix of more and less structured questions. “Usually, specific information is desired from all the respondents, in which case there is a more structured section to the interview. But the largest part of the interview is guided by a list of questions or issues to be explored, and neither the exact wording nor the order of the questions is determined ahead of time. This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic” (Merriam & Tisdell, 2015, p.90). After lessons, teacher researcher interviews the classroom teacher with a structured section but unstructured list of questions to gather information. Classroom teacher’s feedback and evaluation of teacher researcher’s performance are significant for teacher researcher to arouse new ideas and strategies in next lesson.

#### ***3.4.1.2 Student group interview***

“A focus group is an interview on a topic with a group of people who have knowledge of the topic” (Merriam & Tisdell, 2015, p.93). Students in a focus group interview get

to hear each other's responds and to make additional comments beyond their own original responds as they hear what other students have to say. Teacher researcher also gets her students' reflection on learning in lessons.

### **3.4.2 Participant observation**

“Observation is a research tool when it is systematic, when it addresses a specific question, and when it is subject to the checks and balances in producing trustworthy results (Merriam & Tisdell, 2015, p.118).

There were two reasons to adopt participant observation in this research. First, the teacher researcher will learn her teaching method combined with language transfer, which offers a great opportunity to observe as an insider and to uncover the hidden factors underlying her teaching practices.

Secondly, the teacher researcher can monitor and facilitate the students' learning through close observation about their behavior, talk, eye contact, and facial expressions. The student participants were young children about 6-7 years old, they may not express their opinion about their L2 learning as accurately as adults. However, their emotional state and mental processes were indicated by. Therefore, teacher research gather information from students' behaviors and comments of what they think of the teaching strategies.

However, the researcher may confront a few difficulties while implementing the participant observation approach. First, the teacher researcher has a limited observational perspective; that is, not all aspects of a situation can be grasped at the same time. For example, it is impossible to observe every student's situation at a time, thus data related to those neglected ones may be lost and such loss usually cannot be

compensated for. In addition, sometimes what the teacher researcher observes may be deceptive. Students who are looking to the front and sitting beautifully does not mean that they are cognitively engaged, which makes analyzing data quite demanding. “Observations should also together with interviewing and document analysis to substantiate the findings” (Merriam & Tisdell, 2015, p.119).

The research will address the limitation by involving student participants and classroom teachers in data collection. They will be asked about their opinions, feedback, and suggestions for revising the lesson. In this way, the teacher researcher will be able to grasp a more comprehensive understanding of her teaching practice. Besides, it will also provide a chance to probe the factors underlying the classroom interaction.

A second limitation of participant observations is that it is difficult for a teacher researcher to teach and observe at the same time. Therefore, observation forms will be prepared before starting a lesson and the teacher-researcher will take down key notes of her observation during lessons and immediately after. After each lesson, teacher-researcher will tick each blank observation form and complete the observation notes within a day.

### **3.4.3 Reflective Journal**

Since the early 1980s, reflective journal writing has been wildly used in language teaching and teacher education as a powerful device to promote students’ thinking and learning (Marzano, 1992; Wang, 1996). A reflective journal is a diary recording what happens during a period of time. But it differs from an ordinary diary in requiring the journal writer’s reflective and critical views on the experience. Therefore, journal keeping comprises two steps. In the first step, the journal writer records events; in the

second one, she steps back and reflects critically about them. It is the latter step which contributes to MSC learning, and thus students' pronunciation improvement.

In the research, the reflective journal includes the teacher researcher's analysis of her observations, for instance, exploring the underlying reason for students' certain behavior or speech, investigating her own practice (e.g. talk, mental processes, emotional state), or examining the classroom teacher's feedback. Also, previous studies were engaged to inform the research. Besides, after student focused group interviews, students are asked to write reflection on learning from certain lessons.

### **3.5 Principles of Research**

There are various principles when conducting the research, including ethical issues, trustworthiness, prolonged engagement, member checking and triangulation.

#### **3.5.1 Ethical Considerations**

Ethical issues can be generated at every step of the research, therefore, they should be taken into full consideration during the whole process of study (Flick, 2014, p.54). The researcher will strictly follow the principles of research ethics and consider the needs and interests of classroom teacher and students to keep them from any harm. The classroom teacher and students will be informed of the main content of the research and provide consent (Flick, 2014, pp.54-55). They will be free to withdraw when feeling uncomfortable or unwilling to continue. No participants will be identified (names, etc.) to ensure confidentiality, but the general information of the whole case will be provided (Flick, 2014).

During the data collection, the time of the interviews and observations will be considered to accommodate the participants' schedules. Furthermore, no challenging



questions will be asked or discussion of their private life. The data collected from individual participants will not be judged or compared with each other (Flick, 2014, p.57). The data will not use for other purposes except research. All the interpretations will be based on the data itself (Flick, 2014, pp.57-58).

Ethics approval for this study will be applied for and sought from the University's Human Ethics Committee.

### **3.5.2 Trustworthiness**

Ensuring trustworthiness in qualitative research involves prolonged engagement, member checking, triangulation and logics.

#### ***3.5.2.1 Prolonged engagement***

Prolonged engagement means researchers spend an amount of time sufficient to be immersed in the issues, to build trust from those providing the data and to build some certainty. The teacher researcher will spend almost 12 months teaching Chinese at one public school, where she will know the situation and the level of their students quite comprehensively, thus, this kind of teaching practice is prolonged engagement.

#### ***3.5.2.2 Member checking***

Member checking is taking data and tentative interpretations back to the people from whom they were derived and asking if they are plausible (Merriam & Tisdell, 2015, p.229). The teacher researcher will present the raw data to study participants for accuracy checking by asking "Is this what do you mean?". She will also ask her students and classroom teacher "I see this happening. Is that the right way to see it?"

This includes presenting them with polished or semi-polished product of the major findings.

#### **3.5.2.3 Triangulation**

Triangulation combines with different methods, study groups, local and temporal settings, and different theoretical perspectives in dealing with a phenomenon (Flick, 2014, p.183). Yin also said “the need to use multiple sources of evidence far exceeds that in other research strategies” (Yin, 2013, p.114).

In this research, triangulation will be achieved by including different sorts of data. Data collection involves reflective journals, participant observation, and interviews (including focus groups). Hence data will come from the perspectives of the teacher-researcher herself, classroom teacher, and students. Triangulation in this study will enable the researcher to produce knowledge on different levels, and to go beyond the knowledge made possible by one method and therefore contribute to promoting the quality of this research (Flick, 2009, p.445).

#### **3.5.2.4 Audit trail**

The audit trail is a method suggested by Lincoln and Guba (1985). An audit trail in a quantitative research describes in detail how data were collected, how categories were derived, and how decisions were made throughout the inquiry (Merriam, B. & Tisdell, J., 2015, p.223). Teacher researcher keeps systematically a record which allows the reader to check stage by stage in order to see that the conclusions are justified. The evidence can be traced from the research questions to the conclusion.

## **CHAPTER 4**

### **CYCLE 1: LANGUAGE TRANSFER, TEACHER-CENTERED STRATEGIES AND IMPLEMENTATION**

Chapter 4 analyses the data from Cycle 1. In the first part of this chapter, the teacher researcher provides an overview of the research and teaching processes developed and implemented in this project. The second part focuses on data display and analysis. Data display include the lesson plans prepared for two teaching topics, recording of teaching implementation, and excerpts from the after-class reflective journal. The data analysis and discussion then follow. Finally, a summary is provided for this chapter, accompanied by an evaluation of Cycle 1 and implications for Cycle 2 (Chapter 5).

#### **4.1 Research and Teaching Processes in Cycle 1**

This section is an explanation of the research and teaching processes in Cycle 1, which included several steps: planning, teaching implementation, observation and reflection, and evaluation around two teaching topics (Greetings and Family Members). This cycle was conducted in Term 1, 2017, and covered 10 periods of teaching. The data sources included in this chapter are the documentation of lesson plans, and observations recorded in the Observation Form, and excerpts from field notes and reflective journal entries. The teacher researcher's lesson plans have been discussed in

sections 4.2.1 and 4.2.2, and have included the teaching topics, teaching focus, and teaching strategies. During the implementation phase, the teacher researcher observed students' learning performance and recorded these on the Observation Form in addition to observation notes after class. Excerpts from the teacher researcher's reflective journal have focused on evaluating the teaching plans throughout the actual teaching implementation.

## **4.2 Documentation of Teaching Topics and Lesson Plans**

This section has provided the data display and background information for two teaching topics – Greetings (Section 4.2.1) and Family Members (Section 4.2.2).

The teacher researcher designed teaching content based on three possible pronunciation relationships between Mandarin and English – similar, contrast, and zero. In Cycle 1, the focus was on Similar Relations, which would increase students' awareness of the phonetic similarities between Mandarin and English as part of the early learning process. Consideration for the design of teaching content was also given to the students' interests and their age. The participant students were at Stage 1 (Year 6 and 7) and at that stage children often discuss their family so it assumed that students would be interested in topics related to their Family Members and how Greetings are used in conversations with Family and others.

### **4.2.1 Topic 1 lesson plan: Greetings**

The first topic the teacher researcher prepared was Greetings in Mandarin. This included “ní hǎo” (你好 hello), “zǎo shàng hǎo” (早上好 good morning), “wǎn shàng hǎo” (晚上好 good evening), “wǎn ān” (晚安 good night), “duì bù qǐ” (对不起 sorry),

“méi guān xi” (没关系 that is okay), “xiè xie nǐ” (谢谢你 thank you), “bú kè qi” (不客气 you are welcome), and “zài jiàn” (再见 goodbye). In order plan the lessons building on Ringbom’s (2007) principles of similarity, contrast, and zero between languages, the greeting to be taught were analysed against this framework and the results are displayed in Table 4-1

**Table 4-1. Topic 1: Greetings in Mandarin**

	Similar Sounds	Contrast Sounds	Zero Sounds
ní hǎo (你好 hello)	ni – knee [ni:] hao – how [hao]		
zǎo shàng hǎo (早上好 good morning)	shang – shung [ʃʌŋ] hao – how [hao]		z – absent
wǎn shàng hǎo (晚上好 good evening)	wan – one [wʌn] shang – shung [ʃʌŋ] hao – how [hao]		
wǎn ān (晚安 good night)	wan – one [wʌn] an – Anne [æn]		
duì bù qǐ (对不起 sorry)		dui – contrast bu – contrast d, b (Chinese “d” “b” are voiceless while English [di:] [bi:] are voiced)	qi – absent
méi guān xi (没关系 that is ok)	mei – may [mei] guan – gwan [gwʌn]		xi – see [si:]
xiè xie nǐ (谢谢你 thank you)	ni – knee [ni:]		xie xie – absent
bú kè qi (不客气 you are welcome)	bu – boo [bu:] ke – [kɜ]	bu – contrast (Chinese ‘b’ is voiceless while English [bi:] is voiced)	qi – absent
zài jiàn (再见 good bye)			zai jian – absent

Table 4.1 indicates where there were similar sounds in English to attach to the Mandarin pronunciation and hence would be easier for the students to learn; and then looking at the columns for contrast or zero, the teacher researcher assumed without a direct connection is sound, these greetings would be more difficult for young children to learn and would need additional strategies to counteract this lack of connection in sound. At this initial planning stage, the teacher researcher proposed this framework and analysis of the sound/pronunciation links for the chosen greeting words herself, as the first step to develop the lesson, with the intention to revise if necessary based on the students' feedback and their competency once the lessons were underway.

#### **4.2.2 Topic 2 lesson plan: Family members**

The second topic selected by the teacher researcher as being of interest to young children was Family Members. Basic vocabulary chosen included “mā ma” (妈妈 mother), “bà ba” (爸爸 father), “jiě jie” (姐姐 older sister), “mèi mei” (妹妹 younger sister), “gē ge” (哥哥 older brother), “dì di” (弟弟 younger brother), “yé ye” (爷爷 grandfather), “jiù jiù” (舅舅 uncle), “nǎi nai” (奶奶 grandmother), “jiā” (家 home, family). The chosen vocabulary list also included the introduction of the sentence pattern “wǒ ài...” (我爱 I love). The similarities in pronunciation between English and Chinese were analyzed according to the same process as for the topic “Families” with the analysis presented in Table 4-2 below.

**Table 4-2. Topic 2: Family Members in Chinese**

	Similar Sounds	Contrast Sounds	Zero Sounds
mā ma 妈妈 mother	ma – mah [ma:]		
bà ba 爸爸 father	ba – bah [ba:]	b – contrast	
jiě jie 姐姐 older sister			j – absent
mèi mei 妹妹 younger sister	mei – may [meɪ]		
gē ge 哥哥 older brother	ge – [gɜ:]		
dì di 弟弟 younger brother	di – dee [di:]	d – contrast	
yé ye 爷爷 grandfather	ye – yeah [jeə]		
jiù jiù 舅舅 uncle			j – absent
nǎi nai 奶奶 grandmother	nai – nigh [nai]		
jiā 家 home, family			j – absent
wǒ ài 我爱 I love	wo – wall [wɔ:l] ai – eye [aɪ]		

The teacher researcher also divided vocabulary into the three types of relationships according to Ringbom's (2007) theory. Similar to the approach taken in developing the vocabulary list in Topic 1, in this topic of Family Members, the teacher researcher again chose words based on her bilingual knowledge. Tables 4-1 and 4-2 provided an overview on how phonetic similarities in English could be used to learn Mandarin, and where there were contrasts or zero interconnection, then these were highlighted as needing a different approach.

### **4.3 Observation: Student Performance and Teaching Strategies**

This section reports data from the observations and reflections by the teacher researcher recorded during the implementation of the teaching strategies. The teacher researcher observed student responses and approximations to pronunciation during the Mandarin lessons and reflected on them in order to adjust the teaching content and strategies if necessary. In order to do so the teacher researcher developed an observation form and used this to record an overall class assessment on the degree of ease (or difficulty) each new word or phrase appeared to be for students to learn. The use of this observation sheet was a key strategy in Cycle 1 to determine which words and phrases needed additional teaching, and those which were more easily mastered could be maintained with practice. Figures 4.1 and 4.2 in the following sections are examples of Observation Form.

#### **4.3.1 Observation Form recording student performance**

During and after lesson implementation, the teacher researcher recorded students' performance in pronunciation of the selected vocabulary (words, phrases, and sentences patterns). The observation form included space for the teacher researchers' notes and after the lessons these were then compared with the lesson plans based on Tables 4-1 and 4-2 where the pronunciation types between English and Mandarin were categorized as being either similar, contrasting, or zero. Two Observation Forms are included below. Figure 4.1 is a copy of the Observation Form the teacher researcher used when teaching Greetings, while Figure 4.2 displays the assessment for teaching the vocabulary associated with Family Members.



**Observation form**

Participants: \_\_\_\_\_ time: 14/2/2017 class No: 1M/12C observer: Chang Chong Zhang

words	Students' Performance New words	Quickly learned	Just so so	Difficult to pronunciation	Others
1	hǎo	because they already know ✓			
2	zǎo shàng hǎo			✓	"z"
3	wǎn shàng hǎo	✓			
4	wǎn ān	✓			
5	duì bu qǐ			✓	/q/ sound
6	méi guān xi			✓	/x/
7	xiè xiè			✓	/x/
8	hú kè qǐ			✓	/q/
9	zài jiàn		✓		?
10					
11					

because "zaijian" (means good bye) are every basic greetings. Students already know. so. they can pronounce it

**Figure 4.1. The observation sheet for Greetings.**

**Observation form**

Participants: \_\_\_\_\_ time: 7/3 12017 class No: 1M/100 observer: Changchang Zhang  
 12:35pm - 1:01pm

words	Students' Performance	Quickly learned	Just so so	Difficult to pronunciation	Others
	New words				
1	mā mā	✓			
2	bà bà	✓			
3	gē ge		✓		first wrong "g" → "j"
4	dì dì		✓		/d/ in Chinese are voiceless
5	jiě jiě			✓	
6	mèi mèi	✓			
7	jiā			✓	
8	nǎi nǎi	✓			
9	yé yé	✓			
10	jiù jiù			✓	
11	wǒ aī ...	✓			

**Figure 4.2. The Observation sheet of Family Members**

The Observation Forms with notes reflected how the students performed in learning the pronunciation of vocabulary analyzed by the teacher researcher as having a similar, contrasting or zero sound relationship with English. As the teacher researcher expected, the Mandarin vocabulary with similar sounds to English were more quickly learnt. This analysis confirmed that a meaningful word in the English language where the pinyin has a similar phonetic link to the Mandarin Pinyin, enabled students to learn

and be able to pronounce the vocabulary quite quickly, for example, “ní hǎo, wǎn shàng hǎo, wǎn ān, māma, bàba, mèimei, nǎinai, yéye and wǒ ài” (Figures 4.1 and 4.2). However, as is also revealed from the Figures above, although some Pinyin appeared to be similar to English, such as “gēge” and “didi”, they were in fact more difficult because these pinyin did not have the same English phonics. Students were confused when they attempted to ‘read’ the pinyin as an English word, and hence were unable to achieve the correct pronunciation, due to the contrast in the sound relationship. For example, the pinyin “gēge”, has a similar appearance to an English word, however the difference in Mandarin pronunciation confused many students.

Although this research explored the notion that vocabulary with similar English phonics to the Mandarin Pinyin will be learnt more easily than vocabulary with contrasting or zero relationship there can be exceptions. In the case of these lessons it was observed that the pinyin “zài jiàn” even though there was dissimilar pronunciation of “z” and “j” between English and Mandarin the students actually learnt the pronunciation quite quickly because “zàijiàn” (good bye) was a basic greeting in Mandarin. Students were exposed to the greetings “ni hao” (hello) and “zàijiàn” on a frequent daily basis and therefore all the students could pronounce “zàijiàn” successfully. This indicated that intensive training or drill can have a positive effect on pronunciation teaching.

In the early beginning stages of Mandarin learning for these Stage 1 students, they assumed all pinyin was phonetically similar to English. There were unable to distinguish those pinyin containing either contrasting or zero relationship to English. Therefore, the teacher researcher’s intervention was necessary to clarify these relationships between the pinyin and English phonics for the chosen vocabulary.

During the two lessons, the sounds which were in contrast to English, for example, “duì”, “bù” in “duì bù qǐ” and “bù kè qǐ” were replaced by the English sounds [drwɪ] and [bu:]. Voiceless and Voiced sounds in the two languages shared minor differences in actual pronunciations, and it was difficult for beginning non-background Chinese students to grasp Mandarin as accurately as native Mandarin speakers. Therefore, another strategy was to allow students to find their own counterparts in English when learning Mandarin in class, while at the same time taking responsibility of explicitly explaining and pointing out these differences for students, no matter how small the variation. Throughout Cycle 1 other different types of contrast relationships occurred as demonstrated in Table 4-3. The difficulties for students in pronouncing these sounds was related to the different orthography of the letters in English and Pinyin and students drawing on their English knowledge overgeneralized to similarity relationships for all vocabulary when in fact they were not similar but were rather contrasting sounds. As noted in the teacher researcher’s journal:

I assumed that because English and Mandarin both have letters “g” and “j”, Pinyin “gē ge” had a similar relationship. However, students mixed Pinyin “gē ge” with the English sound “ji” [dʒi:]. The reason I figured out later was “g” has the same appearance in Mandarin and English, but is different in pronunciation: it has two sounds, [dʒi:] and [g] in English, with one sound [g] similar to Mandarin [gɜ]. I didn’t include the other different sound [dʒi:], which created students’ misunderstandings. Pinyin “e” also has different sounds [ɜ] in Mandarin and [e] in English. These two vowels and consonants make it difficult for students to figure out and pronounce Pinyin “gē ge” accurately. (Teacher researcher’s reflective journal, Term 1, 2017)

The teacher researcher realized that what happened in class sometimes did not always match the planned lesson. Her perception of similar pronunciations in the two languages sometimes were different from those of her Australian students. Furthermore, even words belonging to similar relations sometimes could be confusing for beginning students. To be specific, it was assumed that the Mandarin “gē ge” was easy to learn because of the similar sound in English. However, some students were confused with the two different pronunciations of “g” in English ([dʒi:] and [g]), with one sound [g] similar to [gɜ] in Mandarin “gē ge”. This was the result of L1 negative transfer: English and Mandarin “g” share the same appearance. Students whose first language is English will automatically read Mandarin “g” as [dʒi:]. Detailed analysis is displayed in Table 4-3:

**Table 4-3. Contrasting sounds in Mandarin and English**

“g”	Mandarin Pinyin	English
Appearance	Same	Same
Pronunciation	[gɜ]	[dʒi:]/ [g]
“e”	Mandarin Pinyin	English
Appearance	Same	Same
Pronunciation	[ɜ]	[e]

Inspired by the students’ responses when learning the Pinyin “g”, the teacher researcher also made an analysis of sounds that belonged to the zero relationship category to test if there was sounds in English that linked to the written Pinyin, but written in a different phonetic sequence, which then could be applied to Mandarin learning. Table 4-4 below displays Pinyin with zero relation in pronunciation to the

English letter, but which have counterparts in English, needing to be represented with phonetic spelling.

**Table 4-4. Zero relation in Mandarin and English**

Pinyin		Mandarin Pinyin	English
“x”	Appearance	Same	Same
	Pronunciation	Similar to English [ʃ], [sɪ:]	[eks]
“q”	Appearance	same	same
	Pronunciation	Similar to English [tʃ]	[kju:]
“j”	Appearance	same	same
	Pronunciations	Similar to English [dʒi:]	[dʒeɪ]
“z”	Appearance	same	same
	Pronunciations	Similar to English [z]	[zed], [zi:]

Table 4-4 demonstrates that counterparts in English can be found for zero relation in terms of four Pinyin: x, q, j, z. Comparing the two tables above (Table 4-3 and Table 4-4), although little or no phonetic similarities as expected could be identified, with the teacher researcher’s explanation students were able to identify sounds which they thought were similar enough to assist with learning the new vocabulary in a totally new language – Mandarin. If students can be taught to identify which letters in Pinyin have different pronunciation to the English letter/sound relationship, then the categories of similar, contrast and zero (Ringbom 2007), are less distinct. The core significance of clarifying pronunciation relationships between English and Mandarin Pinyin is to find phonetic similarities in order to learn Chinese Mandarin in an effective way. Students realized phonetic similarities easily when sounds, words, phrases and

sentence patterns are similar or directly the same. In another situation, if there was no counterpart or phonetic similarity, the teacher researcher looked for underlying connections that could be found in contrast and zero relations, though students found it difficult to learn those in Mandarin Pinyin. Vocabulary with contrast or zero relationship between the Mandarin Pinyin and English phonics system are discussed below in the Teaching strategies section, but have received more attention in the following cycles of teaching/chapters.

#### **4.3.2 Teaching strategies**

If Ringbom's (2007) proposal that similarity between two languages is assumed to provide a useful strategy for helping students with pronunciation, the teacher researcher then developed teaching strategies around this notion to enhance the teaching and the learning of Mandarin pronunciation. Use was made of the similarities in English sounds to help students pronounce Mandarin, accompanied by the reversed strategy of transferring Australian Pinyin to Chinese Pinyin. However, the data revealed that using the strategy of similarity techniques only, was not always effective. Additional strategies were needed to assist students' learning. The four teaching strategies used in Cycle 1 were categorized as (i) cross linguistic similarity in pronunciation, (ii) cross linguistic contrast in pronunciation, (iii) zero sounds in pronunciation, and (iv) supplementary strategies, in order to obtain data to answer the research questions.

##### ***4.3.2.1 Cross-linguistic similarity in pronunciation***

During the implementation phase, the teacher researcher utilized a core teaching strategy, which was also referred to as transferring Australian Pinyin to Chinese

Pinyin. “Australia Pinyin” refers to the phonetic similarities in Mandarin. Examples of this strategy were recorded in the teacher-researcher’s reflection journal:

To begin with, I linked Mandarin Pinyin to some specific English words or pronunciation, for example, “ní hǎo” (你好 hello) is pronounced like “knee” [ni:] and “how” [haʊ] in English. Students were required to read it according to both the Chinese Pinyin and English phonics. As I expected, they could read Mandarin “ní hǎo” accurately enough with the help of this strategy. Repetition is a traditional and useful strategy to consolidate students’ learning, in combination with the gestural-oral strategy and rhythm-based strategy as supplementary. I introduced a Chinese song named “ní hǎo gē” (你好歌 Hello Song) together with typical body movements. The tune was the same as “London Bridge Is Falling Down”, which functioned as a similarity technique. Typical gestures such as waving hands while singing the Pinyin “ní hǎo” were also designed into this song. Students imitated me unconsciously with each designed movement. They also added more gestures for different greetings: waved right hands to say “ní hǎo” (hello); stretched arms to say “zǎo shàng hǎo” (good morning); twisted their heads to say “wǎn shàng hǎo” (good evening). They felt relaxed rather than awkward, and became more confident in reading the greeting words in Mandarin. After practice, I also invited students in pairs to perform in front of the class. Even if they were not sure about certain Mandarin words, they could recall them and continue the performance right after I showed them which gestures related



to that Mandarin. If not, other students who were watching also helped them. (Teacher researcher's observation notes, Term 1, 2017)

The excerpt above revealed that, the utilization of transfer theory (Ringbom, 2007) to assist students acquire Mandarin, needed additional strategies for beginning learners. Using the English phonics with Mandarin “knee” [ni:] “how” [hao], and the tune from a well-known nursery rhyme “London Bridge Is Falling Down” allowed the students to participate successfully in this lesson. Moreover, the implementation of this song also used a combination of both gestural-oral and rhythm based strategies. Students were inspired by the teacher researcher to dance to the song and to join in with the gestures and body movements, which helped them remember and recall newly learnt Mandarin hopefully to their long-term memory.

Rhythm, according to Oxford English Dictionary (2016), is a strong, regular, repeated pattern of movement or sound. There are two types of Rhythm such as music rhythm and speech rhythm (Zhu, 2017). Zhu had reported the efficiency of music in regards to engaging students' learning. The rhythm based strategy in this research refers to music rhythm as well.

#### ***4.3.2.2 Cross-linguistic contrast in pronunciation***

In order to counter any negative effects from cross-linguistic contrast in pronunciations the teacher researcher made efforts to expand students' cognition about the contrasting relationships between some English and Mandarin pronunciations.

According to Ringbom (2007), a contrasting relationship is perceived when L2 patterns differ in significant ways from L1 patterns, however there may be some underlying similarities. Contrast relationships do not necessarily mean the

relationships between L1 and L2 are exactly the opposite but that it is important for beginning students to look for hooks to help with memorizing the correct pronunciation. As discussed previously students confused the Pinyin “gē ge” with the English sound “ji ji” [dʒi:] resulting from the similar appearance of “g”. The teacher researcher then needed to assist student learning with further explanation on the contrast relationship in English and Mandarin for the pronunciation of “g”. The following excerpt from the teacher researcher’s reflections indicates how students were supported to find the similarity underlying the contrasting relationship:

And then I wrote down English word “good” on the white board and told them the Chinese sounds represented by “g-” were similar to [gɜ] sound in “good”. If you encountered it next time, please tell yourself you’re good enough to read it correctly! Some of the students still felt confused with these sounds when practicing. However, when I repeated again and asked questions like: “ji ji” [dʒi:]? “Is that correct?”, students would correct the sound [dʒi:] to [gɜ:] by themselves as well as with the help of their classmates. (Teacher researcher’s observation, Term 1, 2017)

In this instance, the teacher researcher made use of the similar sound [g] in “good” to develop students’ cognition of Pinyin. The underlying similarity between Mandarin and English in this situation was the second sound [g]. Some students still found it was difficult initially due to their lack of understanding that underlying similarity of the second similar sound. Therefore, it was important for the teacher researcher to explicitly explain Pinyin in order to enhance students’ ability to recognize them in the initial phases of the teaching and use their knowledge of English to learn Pinyin consequently.

#### **4.3.2.3 “Zero” sounds in Mandarin and English**

“Zero relation” is the concept used by Ringbom (2007) to refer to patterns in the foreign language being learnt as having little or no noticeable relationship to learner’s L1 at early stages of the learning process. The teacher researcher was required to assist the students in addressing the pronunciation examples where there appeared to be no relationship between Mandarin and English. However, at the beginning of acquiring Mandarin, it was demanding for Stage 1 students to recognize the zero relationship causing difficulty in recognition. In this situation where the Mandarin Pinyin could not be used as a transfer technique, the teacher researcher implemented a traditional pronunciation teaching strategy in this cycle known as “Intuitive-Imitative Approach”. This strategy requires students to listen carefully and imitate the teacher researcher to achieve correct pronunciations (Cimenli, 2015).

When it came to the sounds absent in English, it was difficult for students from English-speaking countries to relate their English knowledge to understand and pronounce the Pinyin, not to mention the teacher researcher searching for the phonetic similarities between the two languages. Therefore, the teacher researcher modelled pronunciations first and explained sounds in detail to help students’ learning. For example:

I guided students to learn the inaccurate sound “j” [‘dʒi:] with the help of Pinyin “yī” [i:], which could be pronounced by them correctly. After articulating “yī” [i:] with teeth don’t meet together and mouth open, students had to slowly put together their teeth. Then they could pronounce the sound “j”. I modelled with exaggerating the shape of my mouth and

asked students to practice this sound with peers. (Teacher researcher's observation, Term 1, 2017)

The data demonstrated that for the zero pronunciation relationship, breaking down these sounds into small elements was effective. As can be seen, the teacher researcher could not achieve her teaching goal in one step. She had to break the “j” [‘dʒi:] sound into two steps, which allowed students to pronounce it bit-by-bit. It was also a good way to enhance students’ confidence to learn more complex Mandarin Pinyin. What also can be seen was the teacher researcher used semiotics, modelled with exaggerating mouth shape, to help students read and pronounce the “j” [‘dʒi:] sound in a better and clear way.

#### ***4.3.2.4 Supplementary strategies***

Teaching strategies based on the phonetic similarity between Mandarin and English were effective only with vocabulary that were similar. All vocabulary teaching cannot draw on this method. With some vocabulary it was difficult to teach pronunciation when it was difficult to find obvious connections when there was contrast or zero relationship between the English phonics and Chinese Pinyin. Other supplementary strategies were necessary such as creating a Mandarin learning environment, using a visual-oral teaching strategy (picture drawing), and creating more opportunities for students to practice Mandarin Pinyin orally in class.

##### ***4.3.2.4.1 Creating a Mandarin learning environment***

In addition to the teaching of greetings as a starting point, the teacher researcher was also intent on creating a learner-friendly environment in the classroom through displaying flashcards with greetings in Mandarin Pinyin. Students saw these flashcards

every day, which assisted them in remembering the vocabulary under study. This was noted in the reflections recorded following an interview with the Year 1 classroom teacher:

One strategy I learnt from the classroom teacher was to present pictures that match the teaching content. She told me the advantage of using pictures: “with pictures, students could easily work out which conversations matched to which pictures. Such an environment was helpful for students’ every day practice. Flashcards with vivid conversations about greetings was a good idea to hung on the wall”.

(interview with the Year 1 classroom teacher, Term 1, 2017)

Students combined Pinyin about greetings with vivid images through flashcards displayed prominently in the everyday learning environment. The data indicated that teacher researcher was able to improve her teaching practice by observing the experienced classroom teacher’s teaching strategies and feedback. It also indicated that the physical classroom set-up as a supplementary teaching strategy was effective.

#### *4.3.2.4.2 Visual-oral teaching strategy*

Colourful pictures as vivid images helped students engage in Mandarin learning. Practicing Mandarin with visual aids was one of the picture-based multimodal approaches in the teacher researcher’s class. She made use of this strategy to motivate students when learning Mandarin and collected data from her lesson plans, observation forms and reflective journal. In this way, she compared students’ performances by plans, observations and reflections. First data is from her lesson plan:

Students received a worksheet with a colourful picture of “Lily’s Family” (Figure 4-3), which was also presented on the interactive whiteboard. The strategy worked like this: To begin with, students were required to figure out by themselves the Pinyin of Families they’ve already acquired, after 5 minutes, teacher researcher presented each Family Pinyin on the whiteboard ( “bàba”, “yéye”, “gēge”, “jiějie”, “dìdi”, “mèimei”, “nǎinai”, “māma”); after that, the students had to copy down those Pinyin respectively next to the carton images and read them while copying; the teacher researcher then picked up students randomly by asking: “Who is this she/ he?”, students who chose to answer should use Mandarin.(Lesson plan segment, Cycle 1, Topic 2).



**Figure 4-3. PowerPoint slide: Lily’s Family.**

Data generated from the lesson plan illustrate how the visual-oral teaching approach helped students’ practice their Mandarin. The colourful picture (see Figure 4-3) with elements familiar to students was in the visual mode; students matched the Pinyin for each of the family members and the pronunciations in Mandarin belonged to the oral mode. In this way, they were stimulated with both visual and oral modes.

After writing the Pinyin, some students began practicing pronouncing them automatically. This was self-driven learning, which was a reflection of students' active engagement in the Mandarin lessons. The loud and vocal contributions showed students' willingness to contribute in class. After intensive practice, students answered questions spontaneously to the point where Mandarin flowed from their minds and they pronounced words with no hesitation. This was great progress in comparison to their silence caused by fear of making mistakes during earlier lessons. The rest of the students followed with the correct pronunciation. It seemed that students also learnt from their peers and could follow the examples. At this moment, a climate of learning had been established, and almost the whole class was engaged in learning.

The effectiveness of visual-oral teaching strategy was also noted down in the teacher researcher's journal:

I noticed it was so time consuming if students draw pictures by themselves. The classroom teacher sometimes would offer students pictures to color in. I also applied this strategy to the Year 2 class. Unexpectedly, the students loved this picture and read Mandarin loudly while they coloured it in. They were immersed in their creations and were motivated to show their pictures after finishing. (Teacher researcher's reflective journal, Term 1, 2017).

In the reflective journal, the data revealed that it was useful to stimulate students' interest in learning Mandarin by offering pictures to colour in, which was an activity with a strong visual element. After that, students were provided with opportunities to demonstrate their unique "masterpiece" by vocalizing the Mandarin Pinyin they had

learnt. The visual and oral teaching strategy then combined to assist them to learn Mandarin.

The data above indicated that students' learning processes are influenced by many factors: students' learning motivations, learner-friendly environment, visual aids and oral-practice opportunities. It is also important to engage all students in the Mandarin class. If students were not engaged and on-task during Mandarin lessons, they would not be able to grasp Pinyin. The visual-oral teaching strategy as an additional teaching strategy engaged students well and therefore can serve as assistive techniques to achieve a more satisfactory and learning outcome.

#### *4.3.2.4.3 Creating more opportunities for students to practice*

Students were very active when answering questions and eager to show their learning outcomes. Therefore, the teacher researcher seized this opportunity. For example:

Students well engaged in the role-play game. When the first round was finished and I picked other different students who were interested in this game, students who already had a chance put their hands up again. The overall atmosphere in class was very active. Students also had flashcards of Family Members in Pinyin and were required to practice them with their peers. After several minutes, the majority of them raised their hands to answer my questions enthusiastically, even though some of them were uncertain about the right pronunciation. Students were eager to show what they had learnt in this Mandarin lesson and wanted to let me know how well they could understand and acquire the knowledge I taught. Therefore, as a teacher, I should provide more chances for them to practice. (Teacher researcher's reflective journal, Term 1, 2017)



Students were eager to show their learning outcomes so the teacher researcher also adjusted her teaching strategies based on this desire. It also enhanced her confidence to realize that her Mandarin teaching was actually productive. The interactions between the teacher researcher and the student participants both facilitated the evaluation evidence that the teaching and learning was moving towards more effective practices. The data above also reflect how learning a new language not only includes acquiring language but also using language in the output process. Creating more opportunities for students' to demonstrate their knowledge facilitated students' Mandarin learning.

## **4.4 Discussion**

Three themes emerged from the analysis of Cycle 1 data, and this section has provided a discussion on these themes: (1) Reflection on the teaching topics, (2) Effectiveness of teaching strategies, and (3) Teacher-centered practice.

### **4.4.1 Reflection on the teaching topics**

The design of the teaching topics and teaching content was based on the research questions guiding this research which focused on the similar, contrast, and zero relationships between Mandarin and English as the basis for teaching Mandarin as a foreign language to Australian school children. The teacher researcher taught sounds, words, phrases, and sentence patterns that belonged to each category (Ringbom 2007) in order to collect the data to answer the research questions.

The topic chosen for language learning also influences the implementation of the teaching strategies. It has been said that children learn a second language more effectively when the language serves some useful and meaningful communicative

purpose (Genesee, 1994). Language is a mean of communication and if students could use Pinyin in their everyday activities with the people surrounding them, they will learn Pinyin more actively. Therefore, the teaching topics selected by the teacher researcher (Greetings and Family Members), not only worked for the research purposes but also for students' communicative goals. Genesee (1994) also believed that grade-level teachers should diversify effective teaching strategies when teaching the chosen content in order to extend students' acquisition of language skills. This argument demonstrates that teaching strategies need to be varied and engaging – not repetitive and boring. If students have an interest in the topics and content, they will be motivated to learn. Reflecting on the effectiveness of the various teaching strategies used in this research to teach Mandarin has been another main focus of this chapter. Therefore, the importance of topic selections and in this case, Greetings and Family Members, has provided the framework for the design of the teaching content, teaching strategies, and students' motivation in order to answer the research question.

#### **4.4.2 Effectiveness of teaching strategies**

Transfer theories hold the opinion that the teaching and learning of a new language should necessarily and systematically use both the learner's first language (for example, English) and the target language (for example, Chinese) (Ausubel, 1968; Cummins, 2008; Ringbom, 2007). Transferring techniques adopted in Cycle 1 were relating Australian Pinyin to Mandarin and incorporating Mandarin lyrics to the tune of a familiar English nursery rhyme. These were based on phonetic similarities as represented in the Mandarin Pinyin being able to be read using English phonics and drawing on the students existing knowledge of the nursery rhyme and its tune. Singing the Mandarin lyrics to the tune of London Bridge is Falling Down, resulted in a rhythmic practicing of the chosen vocabulary, and this sing-song patterning like choral

reading, can be a familiar, enjoyable and effective means of practicing language (Lewis & Reinders, 2008). Drawing on students' prior knowledge appears to be universally accepted as a successful teaching and learning strategy across any particular subject/content area (Han, 2017). Although Ringbom (2007) believed it was extremely difficult for English background students to relate any knowledge of their English to learn Mandarin, the teacher researcher identified and taught vocabulary where English and Mandarin Pinyin were similar and hence pronunciation was enhanced.

However, data generated from Cycle 1 indicated teaching strategies solely based on transferring L1 phonics and pronunciation to L2 were not universally applicable to all Mandarin vocabulary. When pronunciation of particular vocabulary chosen as essential to the teaching topic and content, had zero similarity in phonetics or where any apparent relevance or underlying similarity in phonics to help with pronunciation was not easily recognized, then this teaching strategy could not be used. Teaching strategies based on transferring knowledge of English phonics to Mandarin Pinyin needed other supplementary teaching strategies including taking account of the physical learning environment, combining visual and oral activities and providing interesting opportunities for practicing pronunciation of Mandarin learning.

One researcher outlined the importance of the physical learning environment as having a powerful influence on students' expectations, attitudes and behaviors (Fraser, 2015). Students appreciate colourful, interesting wall displays such as maps, calendar pictures and photographs taken in class. Students themselves should also be given opportunities to organize, maintain and update certain sections of the displays (Lewis & Reinders, 2008). Throughout Cycle 1, the teacher researcher hung flashcards on the wall as part of students' everyday physical learning environment to assist with students' learning

of Mandarin. This offered the students sufficient chances to practice asking and answering questions and to plan and write the captions (Lewis & Reinders, 2008). The effectiveness of various teaching strategies that specifically use supportive visual materials within the learning environment to engage students' Mandarin learning have been explored by researchers including Zhu (2017), Xu (2014) and Shi (2017).

Another supplementary teaching strategy applied in Cycle 1 was the oral-gesture strategy when practising Mandarin through song. Research has suggested that using songs, visuals and body language in a language class has a number of invaluable effects that cannot be underestimated. For example, with the help of appropriate visual aids students can both understand a topic easily and process the information faster and store it in the long-term memory (Cimenli, 2015). The activities and teaching strategies undertaken in Cycle 1 have intended to engage students successfully so that any pressure in learning a second language has been reduced. Engaging students in the activities enables them to have some control over their own learning environments (Lewis & Reinders, 2008).

#### **4.4.3 Teacher-centered practice**

Teaching styles can be understood as “the patterns of decisions teachers take when mediating their students' learning” (Diaz-Maggioli, 2004, p.12). Teaching styles also refers to the way teachers perform in the classroom, that is, teacher behaviour. It was researched that teacher behaviours were influenced by many factors, which included personal issues, professional knowledge, career ambition, institutional and curriculum factors (Diaz-Maggioli, 2004). In Cycle 1, the teacher researcher selected teaching material and content based on her bilingual knowledge. Some teaching strategies also were informed by the mentoring classroom teachers' teaching style and feedback on

the teacher researcher's lessons. At the start of the teacher researchers second language teaching in collaboration with the classroom teacher it was deemed most effective to adopt a teacher-centered teaching style as most appropriate with the young children beginning to learn Mandarin. Even so, as the teacher researcher tried to find the counterparts in English to learn Mandarin Pinyin, some students became puzzled and questioned "why", while others could not approximate the pronunciation of some Mandarin words. Explaining the rationale behind the activities helps students learn how to learn (Lewis & Reinders, 2008). This was a learning curve for the teacher researcher. After reflecting on teaching in the reflective journal it became clear that the teacher researcher needed to explain why it was worth seeking counterparts between English and Mandarin and therefore planned to give students more opportunities in analyzing phonetic similarities in Cycle 2. Strengthening students' awareness of the similarities and differences between Mandarin and English was the priority for the next cycle of teaching. Considering other issues such as the young beginning learners' motivation to learn Mandarin also had to be taken into account in the planning for Cycle 2. Cycle 2 would be designed to include more student-centered teaching practices to increase students' interest in Mandarin learning and thus to some extent reduce the barriers of second language learning.

#### **4.5 Conclusion and Implications for Cycle 2**

In Cycle 1, the teacher researcher chose two topics: Greetings and Family Members. It was established that the students already had acquired some knowledge of Mandarin such as daily greetings and addressing their family members, which therefore made good sense that these be the focus of the teaching topics and content in Cycle 1. The teacher researcher then used Ringbom's (2007) categorization to divide the vocabulary

to be taught, into three groups: similar, contrast and zero to denote the relationships between the English and Mandarin Pinyin. Cycle 1 began with a focus on the vocabulary that had a similar phonetic relationship between the English and Mandarin Pinyin. Each Mandarin Pinyin was analyzed according to the teacher researchers' bilingual knowledge, with students' having less participation in expressing their own ideas and thoughts. Students' initiative in topic selection, teaching content, teaching strategies and research feedback was then considered as needing more consideration in Cycle 2.

Cycle 1 focused mainly on teaching Mandarin vocabulary and pronunciation where English and Mandarin Pinyin have a similar relationship and hence beginning learners can 'read' Mandarin Pinyin and have success in correct pronunciation. Although this was the main vocabulary teaching strategy in Cycle 1, some necessary vocabulary important to the topic needed to be taught and many of these words had contrast or zero relationships between English phonics and the associated Mandarin Pinyin and therefore pronunciation was a challenge for beginning learners. In the case of zero and contrast relationships for English and Mandarin vocabulary taught in Cycle 1, modelling and drill were the most effective strategies at this first stage of learning a second language. Based on this finding in Cycle 1, it was considered necessary to further this exploration in Cycle 2 – as not all vocabulary to be taught has a similar connection between English phonics and the Mandarin Pinyin.

Cycle 1 has been the foundation for the following two cycles (Chapters 5 and 6) to further analyze Ringbom's (2007) theory of language transfer between L1 and L2 in language learning when the languages are English and Mandarin. Chapter 5 takes a more in-depth exploration of contrasting relationships between Mandarin learning by young beginning English speaking students. Chapter 5 will also continue with the

testing of the effectiveness of the teaching strategies in answering the research questions and achieving the research goals.

## **CHAPTER 5**

### **CYCLE 2: LANGUAGE TRANSFER, STUDENT-CENTERED MODE AND IMPLEMENTATION**

Inspired by Cycle 1 data analysis, the teacher researcher revised her teaching focus. The findings indicated that classifying the vocabulary to be taught by the relationship between English and Mandarin Pinyin in terms of pronunciation being either similar, contrasting or zero relationship was unsuccessful as the only teaching strategy. Rather than Ringbom's (2007) three categories, the decision was made to consider the chosen vocabulary to be taught in terms of any commonality at all, or none at all. The teacher researcher therefore redefined the relationships between English and Mandarin into two categories. If there were counterparts in the learners' L1, no matter the phonetic similarities on a linguistics level or previous experience connected to an aspect of their L1, this was categorized as a "Similar Relation" and hence teaching strategies based on transferring theories would be applied to enhance students' Mandarin learning. For example, Cycle 1 made use of students' already known English rhythm to learn a new song with lyrics in Mandarin. The "Similar Relation" could occur even if phonetically there was either similar or contrast. The second category proposed was "Non-relation".



The research and teaching processes implemented have been discussed in the first part of Chapter 5 followed by data display and analysis, which has included lesson plans based on data generated from Cycle 1. This chapter has concluded with a summary of the evaluation of Cycle 2 and implications for Cycle 3 research.

## **5.1 Research and Teaching Processes in Cycle 2**

The research process in Cycle 2 included several steps: reflections of Cycle 1, teaching implementation, observations and evaluation of Cycle 2. This cycle was conducted in Term 2, 2017, and covered 10 periods of teaching throughout the whole term. The data sources included documentation, observation, interviews, and reflective journal. The documentation section has included the teacher researcher's lesson plans (5.2.1 and 5.2.2), which included teaching topics, teaching focus, and teaching strategies followed by a summary. Observations of students' pronunciation performance were included in teacher researcher's reflective journals; interviews with the classroom teacher and a group of students have also provided a data source.

## **5.2 Teaching Topics and Lesson Plans based on Cycle 1**

This section has provided the data display and some background information about the two teaching topics. The topics chose in Cycle 2 were Colours (with associated lesson plans in Section 5.2.1) and Fruit (with associated lesson plans in Section 5.2.2).

The teacher researcher designed the teaching content based on evaluations of Cycle 1 teaching and research. Throughout classroom discussions students were given the opportunity to suggest topics of interest to them. The teacher researcher summarized the students' ideas, which became the informed the topics in Cycle 2. Of most interest to the children was 'Fruit'. After consideration the teacher researcher chose the topic

‘Colour’ because it was directly related to fruit. Students could make up sentences which included both fruit and colours. The teacher researcher then considered the relevant vocabulary to be taught and divided these words and phrases according to their relationship between English and Mandarin into two categories: Similar Relationship and Non-relation between Mandarin and English. In Cycle 2, the primary task was the exploration of English counterparts (identifying any relationship between the English and Mandarin), as well as devising effective teaching strategies. As with Cycle 1, the students’ previous experience was considered in addition to their linguistic knowledge to develop teaching strategies for the learning of Mandarin Pinyin and correct pronunciation.

From cycle 1 evaluation and analysis, it became ‘obvious’ that similarities between pronunciation in Chinese and English could be made if there was similar, contrast or zero relation. This was possible because of the teacher researcher and students making connections especially for contrast and zero.

### **5.2.1 Lesson Plans for Topic 1: Colours**

The vocabulary list for the topic colours included the most common colours: “hóng sè” (红色 red), “chéng sè” (橙色 orange), “huáng sè” (黄色 yellow), “lǜ sè” (绿色 green), “lán sè” (蓝色 blue), “hēi sè” (黑色 black), “bái sè” (白色 white), “fěn sè” (粉色 pink), “zǐ sè” (紫色 purple), “zōng sè” (棕色 brown), and two sentence patterns “zhè shì . . . yán sè” (这是 . . . 颜色 What colour is it?) and “wo xǐ huān” (我喜欢 I like) (see Table 5-1). Students’ perceptions of similar sounds in English displayed on the left column with right column of Non-relation analyzed by teacher researcher.

**Table 5-1. Topic 1: Colours in Mandarin**

Pinyin—Colours	Similar Relations (identified by students)	Non-relation (identified by teacher-researcher)
hóng sè (红色 red)	hong – [hɔŋ] se – [sɔː], [sɜ]	Pinyin nasal compounds “ong” Pinyin single vowel “e” – [ɜ]
chéng sè (橙色 orange)	cheng – chain [tʃeɪn] ch–[tʃ] eng– stud <u>en</u> ts [ən]	Pinyin nasal compounds “eng”
huáng sè (黄色 yellow)		Pinyin nasal compounds “ang”, “uang”
lǜ sè (绿色 green)	lǜ se – loser ['luːzə]	Pinyin single vowel “ü”
lán sè (蓝色 blue)	lan – land [lænd]	Pinyin nasal compounds “an”
hēi sè (黑色 black)	hei – hey [hei]	Pinyin two-vowel compounds “ei”
bái sè (白色 white)	bai – bye [baɪ]	Pinyin two-vowel compounds “ai”
fěn sè (粉色 pink)	fans – [fæns]	Pinyin nasal compounds “en”
zǐ sè (紫色 purple)	zebra [ziːbrə]	Pinyin “i” after “z”
zōng sè (棕色 brown)		Pinyin nasal compounds “ong”
zhè shì...yán sè (这是什么颜色 what colour is it?)		Pinyin “i” after “sh” nasal compounds “an”
wo xǐ huān (我喜欢 I like)		Pinyin “i” nasal compounds “uan”

Table 5-1 has displayed the vocabulary with Similar Relations between English and Mandarin as identified by the students whilst the Non-relation vocabulary was identified by the teacher researcher and listed in the right hand column. Wherever

possible, the students preferred to link English words to the Pinyin. Examples were: English “chain” [tʃeɪn], “land” [lænd], “bye” [baɪ] and “fans” [fæns] to Pinyin “chéng”, “lǎn”, “bái” and “fēn sè” accordingly. Pinyin nasal compounds and two-vowel compounds were absent in English language and these were recorded by the teacher researcher and also required attention to be given to the pronunciation rules of these compounded sounds. Of note was the Pinyin “i” needing special consideration when following “zh”, “shi”, and “x”. In this case the normal pronunciation rules did not apply.

### 5.2.2 Lesson Plan for Topic 2: Fruit

The second topic for Cycle 2 teaching was Fruit. The vocabulary list devised for these beginning learners included: “xī guā” (西瓜 watermelon), “píng guǒ” (苹果 apple), “jú zi” (橘子 mandarin), “xiāng jiāo” (香蕉 banana), “cǎo méi” (草莓 strawberry), “pú tao” (葡萄 grape), “táo zi” (桃子 peach), “máng guǒ” (芒果 mango), “bō luó” (菠萝 pineapple), “lí zi” (梨子 pear) along with two sentence patterns: “zhè shì ...shuǐ guǒ” (这是...水果 What fruit is it) and “wǒ xǐhuān...” (我喜欢 I like), the second of which was a repeat from Lesson 1, and hence opportunity for further practice. The teacher researcher then engaged the students in an activity to identify which Pinyin had a Similar Relationship to English. The students’ opinions were recorded along with the teacher researcher’s analysis of those Pinyin with Non-relation status. (see Table 5-2).

**Table 5-2. Topic 2: Fruit in Mandarin**

Pinyin	Similar Sounds (by students)	Non-relation (analysed by teacher-researcher)
xī guā (西瓜 watermelon)	xi – sea [si:] gua – goal [gəʊl]	Pinyin consonant “x”, two-vowel compounds “ua”
píng guǒ (苹果 apple)	ping – ping [pɪŋ] guo – go [gəʊ] ping guo – penguin ['peŋgwɪn]	Pinyin two-vowel compounds “uo”; nasal compounds “ing”
jú zi (橘子 mandarin)	ju zi – juice [dʒu:s]	Pinyin single final “ü”, consonant “j”
xiāng jiāo (香蕉 banana)	xiang – sun [sʌn] xiang jiao – sounds out [saʊndz aʊt]	Pinyin nasal compounds “iang”, three-vowel compounds “iao”
cǎo méi (草莓 strawberry)	cao – towel ['taʊəl] mei – may [meɪ]	Pinyin two-vowel compounds “ei”, “ao”
pú tao (葡萄 grape)	pu – put [pʊt] tao – tower ['taʊə]	
táo zi (桃子 peach)	tao – tower ['taʊə]	Pinyin “i” after “z”
máng guǒ (芒果 mango)	mang guo – mango ['mæŋgəʊ]	Pinyin nasal compounds “ang” two-vowel compounds “uo”
bō luó (菠 萝 pineapple)	bo – ball [bɔ:l] luo – law [lɔ:] bo luo – polar ['pəʊlə]	Pinyin two-vowel compounds “uo”
lí zi (梨子 pear)	li zi – lazy ['leɪzi] – lacy ['leɪsɪ]	Pinyin “i” after “z”
zhè shì...shuǐ guǒ (这是...水果 what fruits is it?)		Pinyin “i” after “sh”
wǒ xǐ huān (我喜 欢 I like)		Pinyin consonant “x”

The data revealed that students, by themselves, were able to identify the words that shared “sort of” similar pronunciation across the two languages and again they preferred linking English words with actual meaning to Pinyin as they did during the

Topic 1 lessons. For example: English words “penguin”, “juice” and “mango” sound like Pinyin “píng guǒ”, “jú zi”, and “máng guǒ”. If English words were unable to match Pinyin as a whole unit, separate single words that matched the Pinyin sounds were identified to act as hooks for the students’ pronunciation attempts. For example: the English words “sea” and “goal” were very similar to the Pinyin “xi gua”; “put” and “tower” to Pinyin “pú táo”. Although some words did not exactly match, they were close enough to make communication understandable.

### **5.2.3. Summary**

Data from both Table 5-1 and Table 5-2 indicate that students’ awareness of relating phonetic similarities in English to the learning of Pinyin strengthened after Cycle 1 teaching. The students were able to identify certain sounds in English from their own perspectives and linguistic experience which assisted them in learning the Pinyin. This reflected a more student-centered teaching mode than the approach taken in Cycle 1.

The students tried their best to connect English words with the associated Pinyin, and were also able to identify those where the Pinyin had no equivalent sounds in English. For example, [dz] in Pinyin “zǐ sè”, “zōng sè” and the sentence “zhè shì...”; [xi:] in Pinyin “xǐ huān”. However, students had difficulty proposing English words when the sounds were missing in English, and hence transferability was unable to assist. For example: The Pinyin “cǎo” of “cǎo méi” was proposed by the students as similar to the English word “cow” [kau]. Although this was an approximation it was actually incorrect, as the pronunciation was [tsau]. Therefore, the student-centered mode had its limitations as students chose inaccurate counterparts and the teacher researcher’s guidance was necessary.

The teacher researcher also found an interesting issue arose from the students' articulation of the different pronunciations of the same Pinyin –“i” . To be specific, the Pinyin “i” in “zǐ sè” was [dz], while in the Pinyin “xǐ huān”, it sounds like [xi:]. Students frequently made mistakes during practice activities. This was understandable as there are simple and compound vowels within Chinese syllables. These are the 10 basic single finals, 13 two-/three-vowel compound finals and 16 nasal compounds (The Educational University of Hong Kong, 2014). The 10 basic single finals include: a, o, e, i1, i2 (only after zh, ch, sh, r), and i3 (only after z, c, s), ê, u, ü, er. The Pinyin single final “i” is special because only after seven consonants (zh, ch, sh, z, c, s, r) it does not sound like [i:] (Halliday,1992). Halliday also gave instructions about how to pronounce these combined syllables: “The lips take up a natural posture at the start of the syllables and remained unchanged throughout” (Halliday, 1992, p. 111). Noting this technique gave the teacher researcher a method for guiding students. When “i” appears together with special consonants, it only works as a place holder and its sound can be ignored. Therefore, Pinyin “zhi” sounds [dʒ] not [dʒi:]; “chi” is [tʃ]; “shi” is [ʃ]; “zi” is [dz]; “ci” is [c]; “si” is [s] and “ri” is [r]. These rules were difficult for the young beginning learners to memorize.

In addition, the two-/three-vowel compound finals and nasal compounds did not receive enough attention at the planning stage, when the vocabulary list was devised. While pronouncing two-/three-vowel compound finals, the position of the tongue and the shape of the lips should change gradually from the initial vowel to the final one. For instance, the pronunciation process of “gua” in “xī guā” is actually [g]–[u]–[ɑ:]. The pronunciation of nasal compounds should move gradually from the tongue position of the front vowel to the tongue position of the nasal consonant at the back, and finally becomes nasal sound completely (Pu Tong Hua, 2018). As the students had

not been taught to pronounce compound vowels during previous lessons, they were unfamiliar with the pronunciation process. The teacher researcher did not consider this prior to lesson implementation and therefore needed to focus particular attention to guide students' pronunciation.

### **5.3 Teaching Strategies**

In Cycle 1 the teacher researcher designed the teaching strategies based on Ringbom's (2007) three possible relationships between L1 and L2. In this Cycle, the teaching strategies were revised based on those trialled in Cycle 1 with deliberate attempts to implement strategies to facilitate students' engagement in their learning. The transferring technique was also applied in relation to students' previous experience, not only in terms of building on their existing linguistic knowledge of Mandarin but also utilizing their knowledge of games and songs in English. Therefore, the teaching strategies utilized in this cycle were not isolated but combined with other strategies, such as playing games, and including gesture-oral activities. As this was the second cycle of teaching, the teacher researcher was more confident to implement indirect teaching strategies (not about teaching language itself) such as setting up classroom routines to practice language and engage students.

The two teaching strategies used in Cycle 2 were (i) counterparts in previous experience – Similarity Relation (section 5.3.1) and (ii) Non-relation teaching strategies (section 5.3.2).



### **5.3.1 Counterparts in previous experience – “Similar Relation”**

This teaching strategy can be divided into two categories: transferring previously learnt Mandarin to newly acquired Mandarin and Transferring between fixed sentence pattern with Visual–oral teaching strategies

#### ***5.3.1.1 Transferability–previous Mandarin Knowledge and Similar Relation***

The teacher researcher used a strategy to learn Mandarin in Cycle 1, which utilized the students’ previous experience, not necessarily related to Mandarin learning. For example, substituting the words of a well-known English nursery rhyme with lyrics in Mandarin. In Cycle 2, students participated in Mandarin lessons in a more active way by being offered opportunities to select the teaching topics and providing feedback on teaching strategies. An example was recorded in the teacher researcher’s reflective journal.

When I introduced Pinyin “cǎo méi” (草莓 strawberry), a student in Year 2 shouted out “Oh, I know, this “méi” is similar to “mèi” in “mèi mei” (妹妹 younger sister)”. I was so surprised because even I didn’t recognise this.

I just asked students to think about the similarity between Mandarin and English; they could actually make use of our previously learnt Mandarin, which was beyond my expectations. My teaching strategies were rewarding (Teacher researcher’s reflective journal, Term 2, 2017)

This data suggested that, students’ awareness of making use of already acquired knowledge to learn a new language was strengthened from what they had learnt in the previous term. Pinyin “mei” is not only similar to English “may” but also very much

like the pronunciation of “mèi mei” (Topic 2 Family Members in Cycle 1). Students showed their initiative to learn Mandarin, which was a satisfactory outcome of the teacher researcher’s interest to develop heuristic teaching. However, the teacher researcher did not realize both Australia phonics and previous-learnt Mandarin Pinyin could facilitate the connection with the new Mandarin vocabulary until the student offered this suggestion. The teacher researcher noted this example of the student’s success in looking for Similarity Relationships between English and Mandarin pronunciation.

#### ***5.3.1.2 Transferring between fixed sentence pattern with a visual–oral teaching strategy***

Students were offered vividly coloured pictures of images about Family Members in Cycle 1. In Cycle 2 black and white worksheets were provided repeating the same sentence patterns as in Cycle 1, in order that the familiar structure would assist the students to learn colours in Pinyin. The teacher researcher collected data from an evaluation of the lesson plans and notes in the reflective journal, which indicated the efficiency of using sentence patterns with visual-oral links as a useful strategy.

The activities provided to the students during the lessons in Topic 1 Cycle 2, utilized the visual-oral teaching strategy together with repeating the familiar sentence patterns, assisted students in learning and using their knowledge of Pinyin in a new and interesting context. Both the pictures the students received and the teacher researcher presented on the screen used the visual mode while practicing the Pinyin within familiar sentence patterns belonged to the oral mode. The combination of these two modes was effective, as “students said they love drawing pictures and could remember vocabulary through sentence patterns”.

### *Lesson Plan*

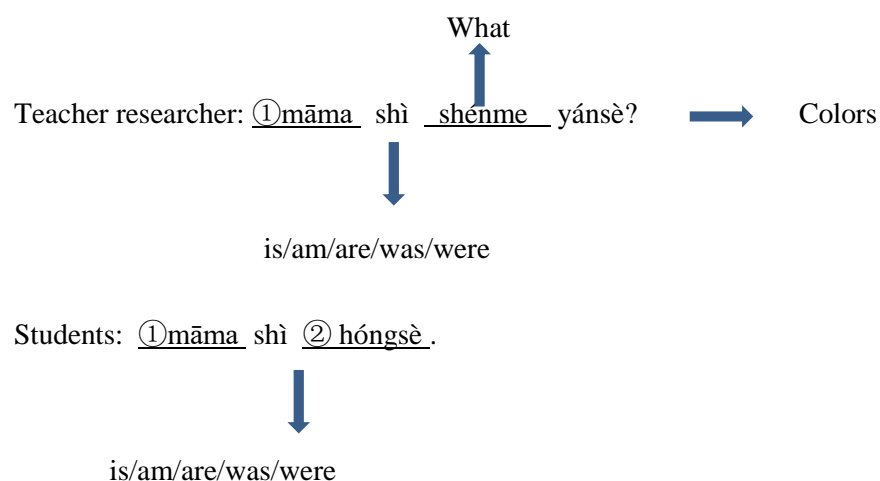
Students received a worksheet with a black and white picture of “Piggy’s Family” which was also presented on screen.

1. To begin with, the students were required to colour in this picture with their favourite colours (5 mins)
2. Teacher researcher reviewed the Pinyin Colours with students (“báisè”, “hóngsè”, “huángsè”, “lánsè”, etc.). (10 mins)
3. Students were expected to copy the Pinyin respectively next to cartoon images matching with colours by themselves (15 mins)
4. Practice Pinyin while copying. (5 mins)
5. Sentence patterns shown on the screen: “māma shì shénme yánsè?” (What colour is mother) and “māma shì hóngsè” (Mother is in red colour). The teacher researcher picked students randomly to practice sentence patterns in order to assist students’ memorization. (Lesson plan segment, Topic 1, Cycle 2)

The sentence pattern made use of previously taught Pinyin to combine newly introduced content, which was an excellent way for students to review Mandarin Pinyin learnt in Cycle 1. The teacher researcher demonstrated that Chinese Language learning was a process including knowing/recognizing, remembering, reviewing, practicing and using. Sentence patterns can be used as contextualized learning of a new language. Students acquired knowledge better when it was contextual in comparison to individual rote of a word.

When she had received this worksheet, a girl shouted, “Woo, I love piggy!”. After students’ finished their own colourful picture, I presented each Pinyin on the screen and practiced them with the students. Most students repeated after me aloud. After the sentence patterns were

introduced: “māma shì shénme yánsè?” (What color is mother); “māma shì hóngsè” (Mother is in red colour). I asked colors of certain students’ picture using the first sentence pattern and asked “Whose first part ① can be replaced by a different Pinyin for the family members?” Students understood the substitution process and were able to join in. They could see the first part of the sentence pattern ① related to the person and second part ② needed the Pinyin for the colour they used in their picture. It was represented as follows:



I then ensured that the sentence patterns were practiced with various students providing their responses until all students understood the structures and usage. Students also had opportunities to ask their peers using sentence patterns they had had learnt. They participated and engaged in classroom activities very well. Students said they love drawing pictures and could remember Pinyin through sentence patterns. It also provided me inspirations about the teaching of Topic 2, whose content “Fruit” could

integrate with “Colors” through same sentence patters. (Teacher researcher’s reflective journal, Term 2, 2017)

The teacher researcher also improved and developed her teaching strategies as part of her own teaching practice, as noted in the reflective journal about making use of same sentence patterns when teaching Topic 2 in Cycle 2.

### **5.3.2 “Non-relation” teaching strategies**

The most difficult Mandarin words for students to pronounce were those with no counterpart in English. It was therefore necessary to develop teaching strategies to assist students in pronouncing those more difficult words and sentences. “Non-relation” teaching strategies included: Breaking down sounds into small elements based on pronunciation rules, Gesture–oral teaching strategy, teaching strategies based on students’ interest and age group, and Setting up a classroom routine.

#### ***5.3.2.1 Breaking down sounds into small elements based on pronunciation rules***

In Cycle 1 students learning to pronounce the Pinyin “j” with the help of Pinyin “i” was an example of this teaching strategy, that is, breaking down sounds into small elements based on pronunciation rules. They were able to read [‘dʒi:] step by step. In Cycle 2, the teacher researcher also applied this teaching strategy to the teaching of compound vowels:

According to my observation, students confused the pronunciations between Pinyin “hóng sè” and “huáng sè”, which sound a little similar if students don’t follow the pronunciation rules of nasal finals. So, I corrected them with exaggerated mouth shape and slower speed. “huáng” was divided into three small elements: “h”, “u”, “ang”. Single vowel finals “h”

and “u” were easy to read. As for the nasal compounds “ang”, the pronunciation should move gradually from the tongue position of the front vowel “a” to the tongue position of the nasal consonant “ng” at the back, and finally becomes a nasal sound completely. Students followed me and practiced with each other. I also invited students randomly to check their learning process. (Teacher researcher’s observation, Term 2, 2017)

This excerpt recorded that the Pinyin “huáng” was difficult for students because of its compound vowels and nasal compounds. The pronunciation rules were also more complex compared to single consonants with vowels. Therefore, it was hard to differentiate students’ pronunciations of Pinyin “hóng sè” and “huáng sè”. The teacher researcher broke down “huáng” into its small elements and slowed down the speed, to scaffold instruction. This teaching strategy also reflected an active role of the teacher researcher to have a more student-centered mode of teaching.

#### ***5.3.2.2 Gesture-oral teaching strategy: Rabbit Squat Down Game***

Cycle 1 explored the effectiveness of the gesture-oral strategy through the activity of encouraging the students to use gestures while singing a Mandarin song. In Cycle 2, the teacher researcher applied this teaching strategy to a creatively designed game: Rabbit Squat Down game as described in the classroom observation notes:

I picked 5-6 students to stand at the front. Each student was required to choose a fruit in Pinyin which could represent themselves in this game. Students should make sure their own represented fruit was not used by any others. I also took a role with “píng guǒ” as my recognized fruit. First of all, I showed them how to play this game: as a “píng guǒ”, squat down three times while saying Pinyin “píng guǒ” three times. Once finished, the

next player named by me randomly should continue this game by saying his/her own represented fruit in Pinyin three times while squatting down. If the Pinyin was not accurate, the player was responsible for squatting down three more times after my correction. Students in my classroom fell in love with this game immediately and participated in this game with much enthusiasm (Teacher researcher's observation, Term 1, 2017)

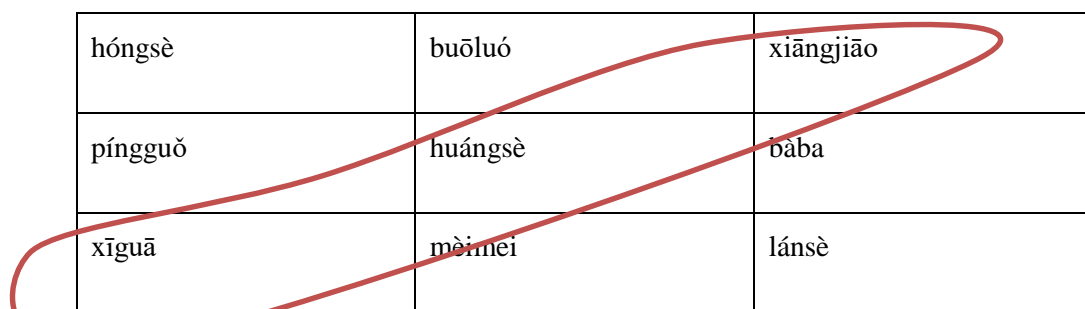
The data above illustrated how an oral-gesture teaching strategy was implemented to engage students in Mandarin lessons. Students' squatting down used the gesture/action mode and their repetition of their chosen fruit in Pinyin employed the oral mode. The teacher researcher improved oral-gesture strategy from Cycle 1 in creative games, which stimulated students' interest in participating in classroom activities. Designing games also was a reflection of consideration by the teacher researcher for a more student-centered mode of teaching as this type of activity was more aligned to Stage 1 students' reality: their age group, learning characteristics and interest.

#### ***5.3.2.3 Teaching strategies based on students' interest and age group.***

As a beginning professional, the teacher researcher was not only required to design teaching strategies suitable for teaching content and to ensure the research focus was maintained throughout the Cycles, but also needed to differentiate her teaching strategies to accommodate the variety of students in the classroom. Individual student's learning characteristics varied from quiet to active for instance. Based on the classroom teacher's feedback, Year 2 students' competitive spirit had to be taken into account, as noted in the teacher researcher's reflective journal:

They desired to play a Bingo game during the Mandarin lesson. I was thinking why not? Therefore, I asked students to randomly fill in the boxes

of a table with 9 Pinyin about colours. It was me who decided which colour was selected and students circled this colour in their own table afterwards. If the colors in their table can form a line, no matter horizontally, vertically, or diagonally, they won this round of Bingo. If no one's table had a line, then I had to give one more Pinyin, or two more until there was a winner. Students who won this game were required to read each colour in Pinyin aloud and a token was given to the winner. They engaged in this activity and played it eagerly. Maybe they just wanted as many tokens so as to receive gifts at the end of school term, or merely wanted to compete with their peers. The whole classroom learning environment was created to attract the most students possible to their Mandarin learning. When there were students who accepted knowledge faster and finished their table quicker than others, a different table with Pinyin not limited to colours was provided in order to engage them as much as possible.



hóngsè	buōluó	xiāngjiāo
píngguǒ	huāngsè	bāba
xīguā	mèimei	lǎnsè

This table included Pinyin about colours, fruits and family members. (Teacher researcher's reflective journals, Term 2, 2017)

The evidence above demonstrated how the Bingo game was a successful activity in the teacher researcher's Mandarin lessons. Though this game looked simple to play, students were actually required to remember the Pinyin they learnt before, copy down the correct Pinyin into their table, listen and understand the pronunciations by the teacher researcher and then identify the correct Pinyin in their table. The teacher



researcher designed this game based on her students' learning characteristics. Moreover, she provided a more complex table for quicker learners in her class which reflected her ability to differentiate teaching strategies to meet the diversity of students. She was also able to learn from previous teaching practice how to improve and develop her teaching strategies.

#### ***5.3.2.4 Indirect teaching strategy: Setting up a classroom routine***

Apart from teaching Mandarin directly, setting up a classroom routine for the beginning of every Mandarin lesson attracted students' attention to the teacher researcher. It was significant because Mandarin lessons in this public school were interspersed with regular classes as part of a fixed timetable. Students had to switch quickly between different subjects and lessons. Implementation of this teaching strategy was based on the feedback from classroom teacher:

Kathy: You know you can get them to stand when you start your lesson.

You can try this model: Whenever starting a Mandarin lesson, you could say, "stand up" in Mandarin.

TR: Yes, I know, this is a typical beginning of class in China. At the very start, teachers always say "qǐ lì" (stand up), with students' standing up and greeting the teacher. The teacher would then say "qǐng zuò" (sit down please) and begin the lessons. At the end of the class, the teacher also says "qǐ lì" with students' standing up and "zài jiàn" (good bye).

Kathy: That's fantastic. Because students will know, "right, it is the beginning of Mandarin class. I have to put everything away and

concentrate on Mandarin now”. You could try this in your Mandarin lessons.

(Mentor teacher’s feedback, Term 2, 2017)

This piece of data demonstrated that it was a good opportunity for students’ revision of previously learnt Pinyin to set up a classroom routine with greetings in Pinyin. The application of a typical Chinese model (saying stand up in Mandarin at the beginning of a class) could also be used in this foreign environment as a means of alerting the young learners to the start of the Mandarin lesson.

The teacher researcher developed this teaching strategy based on classroom teacher’s feedback, who supervised her Mandarin lessons and knew the students’ reality better. This teaching strategy was more a classroom management strategy as it ensured the students disengaged from their current activity and were ready to commence the Mandarin lesson.

## **5.4 Discussion**

Three themes emerged from the Cycle 2 data, and this section provides a discussion of these themes: (1) Reflection on the teaching topics (2) Reflection on teaching strategies, and (3) Transformation from teacher-centered teaching to student-centered teaching.

### **5.4.1 Reflection on the teaching topics (from Cycle 1 to Cycle 2)**

Most teachers agree that the English taught to new arrivals must be everyday English used by others of similar age—children’s language by children, increasingly mature language for older students (Lewis & Reinders, 2008). Similarly, in the Mandarin

class, the teacher researcher chose “Greetings” and “Family Members” in Cycle 1 and “Fruit” and “Colours” in Cycle 2. The teacher researcher also attached importance to the students’ interests when choosing teaching content Cycle 2, therefore students were motivated to learn Pinyin with enthusiasm. The intention was to have students know that what was being taught and what they learnt about Mandarin was not isolated but could be applied and utilized when encountering new knowledge. This was the strategy used when teaching the same sentence patterns so that new Pinyin could be substituted into the familiar sentence pattern. Students would be able to communicate in Mandarin with the help of sentence patterns. Details were included in the teacher researcher’s reflective journal:

When I asked students what they wanted to learn next term at the end of Term 1, the majority of my students answered colours. Therefore, I chose basic colours in Mandarin as Topic 1 in Term 2. As for the topic Fruit, my assumption was that students could make use of colours in Mandarin, which they learnt in Topic 1, to facilitate and consolidate the learning of fruit in Mandarin. At the beginning of Term 2, I guided students to have a quick review about previously learnt Mandarin (greetings and family members). During vocabulary teaching, I also introduced sentence patterns to combine four topics: Greetings + Family Members + like + Colours + Fruit (“níhǎo, māma xǐhuān hóngsè píngguǒ” – hello, mom likes red apples). Students could make up sentences by themselves and they communicated with their peers. Classroom activities such as questionnaires about “which colour does your younger sister like?” can be applied during next class. (Teacher researcher’s reflective journal, Term 2, 2017)

The data demonstrated how the teaching topics in Cycle 1 and Cycle 2 developed from being based on teacher researcher's decisions to engaging students' interests. It has been reported that student's learning styles vary from one to another. For example, many students respond to a highly structured learning system whereas others preferred more flexibility (Lewis & Reinders, 2008). The students in the teacher researcher's class enjoyed a fixed sentence patterns with flexibility around the substituted words to make the sentence different. Therefore, teacher researcher adopted sentence patterns to combine Pinyin students previously learnt in Term 1 with the new vocabulary to be taught: ①Greetings + ②Family Members + like + ③Colours + ④Fruit ("níhǎo", "māma xǐhuān hóngsè píngguǒ" -- hello, mom likes red apples). Parts①②③④ can be replaced by various Pinyin to convey different meanings while the fixed structure was simple for students to make up their own sentences. It was also an excellent way for students to remember vocabulary related to each topic.

Students also commented on this strategy of learning at the end of Term 2:

TR: From Term 2, we have learnt two topics: colours and fruit. Which topic do you find most interesting?

Jack: I like fruit. I like "píng guo".

TR: Do you? I like "píng guo" too. Why do you think fruit is interesting?

Zara: Me too. Because if I went to the grocery in China, I could know the fruits in Mandarin and buy fruit and vegetables in China.

(Student group interview, Term 2, 2017)

This excerpt from the interview showed that students preferred the topic of Fruit because it could be very useful when buying goods in China. It indicated that the teaching content and topics were related to possibilities in the students' life, which were relevant and important to them. As a second language teacher, the teacher researcher could also make further connections to her students by getting to know more about them through other classroom activities, in addition to the student group interview. For example, using a role play strategy where students could make a phone call to a new friend, go to library for information or bring photos from home (Lewis & Reinders, 2008). The classroom activities designed by the teacher researcher also affected students' attitude towards the teaching topics, as students indicated they loved the Fruit topic because they enjoyed the game played with the Pinyin of fruits, which inspired teacher researcher to investigate other links to the students' interests.

#### **5.4.2 Reflection on teaching strategies**

Data generated from Cycle 2 indicated that the teaching of single, isolated words using only the transfer strategy was not always effective in improving students Chinese pronunciation as learning is affected by other factors. In particular, it was necessary to consider the target students themselves (age group, interest, learning characteristics, motivations, purposes) and the learning environment (classroom setting up and learning atmosphere).

The age of the teacher researcher's target students was 6 or 7 years of age. This is a critical age for language learning, according to the critical period hypothesis (CPH) (Muñoz, 2006). Researchers have provided evidence and have defended that a critical age for successful second language learning is between the ages of 4 and 10 (Muñoz, 2006), which includes the age of the Stage 1 students taught by the teacher researcher.

For young learners, a large number of teaching strategies should be adopted to take account of student diversity and learning styles. For example, teaching students at the ages of 6 and 7 should be through hands-on lively activities. During this period, classroom activities should be interesting and attract children's attention constantly. Learning language through games, singing, and dancing for example are suitable for their cognitive level and learning characteristics (Qiong & Min, 2014). Teaching strategies and the activities implemented by the teacher researcher, such as the Bingo game, Rabbit Squat, and music, accommodated the needs of students' during this age range to promote successful language learning.

In summary, trialing the effectiveness of the various teaching strategies taking into account the many possible influences on students' learning at this age, provided a method of continual improvement for the teacher researcher's own professional learning.

#### **5.4.3 Transformation from teacher-centered to student-centered mode**

In Cycle 1 the teacher researcher implemented a teacher-centered mode of teaching and learning Mandarin which created some difficulties. For example, the students did not understand the meaning of combining Australia Pinyin with Mandarin Pinyin as the teacher researcher tried to use Ringbom's (2007) theory to teach vocabulary with Similar Relationship between the pronunciation of English and Mandarin Pinyin. This was noted in the teacher researcher's reflective journal:

In Term 1 during lesson preparations, I made connections between Mandarin and English pronunciations by myself and according to the literature. However, when I asked students "how did you feel about this strategy?" during interview, they didn't understand my questions. They

asked questions like “why did I have to link these two sounds?”; “what’s the point of doing so?”. I was thinking, maybe it was my own fault that students were thinking like this. I don’t always consider why I think my own ideas may be worth trying. After that, at the beginning of Term 2, I explained the reason and let students themselves think about the phonetic similarities. My assumption was an example: “hóng” sounds similar to “Hong” in “Hong Kong”, Hong Kong is a part of China and the colour of the Chinese flag is red. They showed more interest in this strategy and came up with their own connected English words or sounds. Even some of the students recognised some similar sounds I had not thought of. This transformation from teacher-centered to student-centered mode was effective because students showed more concern and understandings of counterparts when participating in the group interview. Sometimes, sounds or words were not similar or correct and transfer was unable to happen, I had to intervene by providing guidance. (Teacher researcher’s reflection journal, Term 2, 2017)

The data from the teacher researcher’s reflections indicated that explaining the rationale behind the activities helped students learn how to learn. After explanations, students understood the teacher researcher’s intentions and they then were able to apply their learning about Similar Relations to seek similar English words or sounds that approximated or were the same as Mandarin’s pronunciations. They were able to advance their own learning. In this way, students were motivated to recall the Pinyin with less effort compared to previously introduced Pinyin by the teacher researcher. They were able to take responsibility for their own learning and this reduced their

reliance on other students and the teacher researcher during the student-centered mode (Spooner, 2015).

Students were then able to continue being at the center of many activities during the learning of Topic 2 Fruit. Hammond (2001) suggested that teachers need to provide opportunities to scaffold and guide students in their thinking in order to help them establish key ideas or concepts. Utilizing counterparts (the Similar Relations in pronunciation), between the two languages provided an opportunity for the teacher researcher to implement scaffolding, which enabled students to regard learning a new language with some confidence.

However, the teacher researcher's guidance was still necessary at this early stage of encouraging a student-centered mode, in part due to the age of the students. Some words or sounds found by students were not accurate enough which meant the teacher researcher had to provide explicit guidance. Similarly, games like Rabbit-squat required the teacher researcher's lead at the beginning until students became familiar with the game. Therefore, a combined mode with teacher as well as students' interactive roles will be trialed in the next round of teaching to gauge its effectiveness.

## **5.5 Conclusion of Cycle 2 and Implications for Cycle 3**

In this cycle, the teacher researcher redefined the relationships between English and Mandarin pronunciation of the vocabulary to be taught into two categories: Similar Relations and Non-relations, with "Similar Relations" including Ringbom's (2007) similar and contrast relations. Throughout Cycle 2 there was a shift in the teacher researcher's teaching style from fully teacher-centered to considered attempts to engage students more by implementing a student-centered mode. Students were



invited to take the initiative to seek counterparts between the two languages and they were more involved in an explanation of the rationale for classroom activities, which then assisted their understanding and engagement. As for teaching content, it moved from vocabulary only in Cycle 1 to vocabulary together with sentence patterns in this cycle. Sentence patterns with fixed structures proved to be an excellent way to practice Pinyin and learn Mandarin as a whole process. The teaching strategies demonstrated in Cycle 2 were a development and improvement on those in Cycle 1.

The improvements identified in Cycle 2 were then used as central findings to inform Cycle 3 teaching and research processes. Similar Relations between English and Mandarin pronunciation need further investigation and improvement together with those divergent Non-relation English and Mandarin pronunciations. The teacher researcher then considered that combining her role as providing guidance, explanations and a role model for correct pronunciation, coupled with the students' initiative (shown to be developing during Cycle2), could be trialled as a co-teaching mode in Cycle 3.

## **CHAPTER 6**

### **CYCLE 3: LANGUAGE TRANSFER, CO-TEACHING MODE STRATEGIES AND IMPLEMENTATION**

Based on Cycle 1 teaching, which was predominantly a Teacher-Centered Mode and throughout Cycle 2 where a more Student-Centered Mode was implemented the teacher researcher improved and developed her teaching and research processes in order to explore the pronunciation relationships between English and Mandarin. In Cycle 3, the teacher researcher's interactive role with students in developing a Co-Teaching Mode has been adopted and has been reported in this chapter.

After Cycle 1, the teacher researcher redefined the three elements to Ringbom's (2007) theory of language transfer into two. These were "Similar Relations" to include Ringbom's (2007) "similar" and "contrast" relationships and a second category was proposed, that of "Non-relation" pronunciation which included words/phrases where there was "zero" overlap between the two languages. During Cycle 2 successful teaching strategies were identified that assisted students' pronunciation of Mandarin when "Similar Relations" were identified between the two languages. In Cycle 3 this was extended, however the emphasis was to seek out effective teaching strategies when Non-relation vocabulary and pronunciation has been chosen as teaching content.

The data sources for this chapter have included the documentation of lesson plans and their implementation, the teacher researchers' reflective journal entries, and the data from interviews with the mentor teacher and a group of students. Finally, a summary has been provided for this chapter, accompanied by an evaluation of Cycle 3 research.

## **6.1 Research and Teaching Processes in Cycle 3**

This section has provided an explanation of the teaching and research processes undertaken throughout Cycle 3, which included: lesson planning based on reflections on the previous teaching in Cycles 1 and 2, teaching implementation, observation and reflection, and an evaluation of Cycle 3. This cycle was conducted in Term 3, 2017, and covered 10 periods of teaching. The data sources included documentation of lesson plans, observation, an interview, and reflective journal entries. The documentation comprised the teacher researcher's lesson plans based on her students' learning in the previous Cycle, and these included the teaching topics, teaching focus, and teaching strategies implemented. Students' success with pronunciation was recorded in observation notes. At the end of the ten teaching periods, the teacher researcher interviewed the classroom teacher and a group of six students. The teacher researcher's reflective journal focused on how the teaching plans worked during the actual teaching implementation.

## **6.2 Documentation: Teaching Topics and Lesson Plans based on Previous Cycles**

This section has included the data display and the background information about two teaching topics, Travel/Places and Travel/Vehicles. Section 6.2.1 has included the lesson plans for Places followed by section 6.2.1, Vehicles.

The teacher researcher continued to structure the teaching content in terms of the two categories of pronunciation relationships between English and Mandarin as established at the commencement of Cycle 2. These were “Similar Relation” and “Non-relation”. As the co-teaching mode was to be implemented in Cycle 3, it was important to have students take an active role in choosing the teaching topics and being more engaged through interactive teaching strategies. At the end of Cycle 2, the students were asked to suggest topics of interest they would like to study in Mandarin class. Their responses were considered with the majority of students interested in the topic and content related to “Travel/Places”. The teacher researcher followed this lead, but also suggested a linked topic of “Travel/Vehicles” as it was related to “Travel/Places”.

The teacher researcher also intended to make use of previously taught vocabulary and sentence patterns where words could be substituted to make a new sentence. For example, the sentence pattern “wǒ hé māma qù zhōngguó lǚ xíng”, which translates to, “I travel to China with my mother” could be used as the framework where students could substitute family members and places to convey various information whilst practicing pronunciation.

### **6.2.1 Topic 1 lesson plan: Travel/Places**

In Term 3, the broad topic was “Travel/Places” which included answers to the questions, who, where, and how. “Who” referred to possible travelling partners. In most cases, children travel with their family members, thus students were required to review Pinyin about family members learnt in Term 1. “Where” referred to travelling to places and destinations. At the beginning of Cycle 3, the teacher researcher asked the students, “Where would you like to travel?” She then summarized students’

answers, which made up the content of Topic 5, Travel/Places. This included “zhōng guó” (中国 China), “fǎ guó” (法国 France), “bā lí” (巴黎 Paris), “yì dà lì” (意大利 Italy), “xīn xī lán” (新西兰 New Zealand), “ào dà lì yà” (澳大利亚 Australia), “xī ní” (悉尼 Sydney), “dé guó” (德国 Germany), “xià wēi yí” (夏威夷 Hawaii), and “fěi jì” (斐济 Fiji). Both students’ and the teacher researcher’s perceptions of similar sounds in English matching to the Mandarin Pinyin have been displayed in the middle column of Table 6-1. Where there was a “Non-relation” link between English and the Mandarin Pinyin, the teacher researcher made comments in the far right column.

**Table 6-1. Topic 1: Places in Mandarin**

	Similar Relation		Non-relation
	Teacher researcher	Students	Analysed by teacher researcher
zhōng guó (中国 China)	zhong –[dʒʊŋ] guo–píngguo (apple)	zhong-hóng (red) guo – gone [gʊn]	Pinyin “z” + “hong (red)”
fǎ guó (法国 France)	fa – [fɑ:]	fa – far [fɑ:]	
bā lí (巴黎 Paris)	ba-bàba (dad) li – [li:]	ba li – ballet [bæ'le]	
yì dà lì (意大利 Italy)	Italy ['itəli]	Italy ['itəli]	
xīn xī lán	xin – sin [sin] xi – see [si:] lan – land [lənd]	xin – sing [siŋ] xi-xīguā (watermelon) lan-lán sè (blue)	Pinyin “lan” VS English “letter” ['letə]

(新西 New Zeeland)		– letter ['letə]	
ào dà lì yà (澳大利 Australia)	ao – oh [əʊ] da – [dɑ:] li [li:] ya [jɑ]	ao da – old [əʊld] li – leave [li:v]	Pinyin “dà” VS English [tɑ]
xī ní (悉尼 Sydney)	Sydney ['sɪdnɪ]	Sydney ['sɪdnɪ]	Pinyin “x” VS English “s”
dé guó (德国 Germany)	de [dɜ] gēge (big brother)	de – dirt[dɜ:t]	
xià wēi yí (夏威夷 Hawaii)	[hə'waii:]	[hə'waii:]	Pinyin “ei”
fěi jì (斐 Fiji).	['fi:dʒi:]	['fi:dʒi:]	Pinyin “ei”

These data in Table 6-1 illustrated how the teacher researcher and the students regarded the comparable sounds or words within the vocabulary chosen by the students for the topic “Travel/Places”. There were several conclusions generated from this table that informed the design of the teaching content and strategies:

The first conclusion was: influenced by their first language, the teacher researcher and students regarded phonetic similarities as separate units. For example, in Chinese Mandarin, normally a Chinese character was combined with a single syllable with lexical meanings, usually one word, one sound and one meaning. The line between syllables is apparent; however, in English, sometimes a word contains several syllables, such as “international” contains five syllables: in-ter-na-tio-nal. Some English syllables have no lexical meaning and must be formed into words to be

meaningful, others have lexical meanings such as “red”. The line between syllables is not as clear as they are in Chinese. To be specific, in terms of Pinyin “ào dà lì yà” (澳大利亚 Australia), the teacher researcher came up with similar sounds one by one: “ao – oh [əʊ]”, “da – [dɑ:]”, “li – [li:]”, “ya – [jɑr]”. Because in Mandarin, one character is one syllable with lexical meanings. However, students’ opinions were: “ao da” similar to the English “old [əʊld]”, and “li ya” was similar to “li – leave [li:v]”. Similarly, “bā lí” (巴黎 Paris) from the students’ perspective was similar to English word “ballet” [bæ'le]. To summarize, many English words are only meaningful when its many syllables are combined.

The second conclusion was: Students’ awareness and ability to find counterparts from previously learnt Mandarin was strengthened because of the previous two cycles of teaching. For instance, “xī” and “lán” in Pinyin “xīn xī lán” (新西兰 New Zealand) were similar to Pinyin “xī guā” (watermelon) and “lǎnsè” (blue).

The final conclusion was: The discovery that within the “Places” section of the Travel topic, it was apparent that there were similarities between the English and Mandarin Pinyin due to loanwords. Phonemic loans are known in Mandarin as “yīn yì cí” (音译词 sound transliteration word) (Miao et al., 2005). It might have been anticipated that the students would easily acquire the accurate pronunciations of these loanwords because of the phonetic similarities. However, students’ pronunciation of some loanwords were inaccurate. Examples were “yì dà lì” (意大利 Italy), “xī ní” (悉尼 Sydney), “xià wēi yí” (夏威夷)

夷 Hawaii) and “fěi jì” (斐济 Fiji). The classification of loanwords includes phonetic loans, semantic loans, graphic loans. In this study, phonetic loans were the main concern. Similarly, Zhu (2017) concluded that there were three types of phonetic similarity between Mandarin and English: similar pronunciations (“ni” – knee, you); Chinese words borrowed from English (“yì dà lì” – Italy), and English words borrowed from Chinese (“dòu fu” – tofu). Chinese words borrowed from English as well as English words borrowed from Chinese also caused confusion for the students in Cycle 3. Take the word “yì dà lì” (Italy) for example. A common phenomenon was that students read the Mandarin “yì dà lì” as “yì tà lì”, caused by the negative transfer from the English word. Although some Mandarin words have been borrowed from the English language system, the pronunciation was quite similar to the English but there were still some slight differences. It was therefore incorrect to read the Mandarin Pinyin using English phonics. The teacher researcher recorded this phenomenon in her reflective journal:

When I planned Topic 5 Places in Mandarin, I found that the Pinyin for some countries were very similar to English because they were actually borrowed from English. I thought students would learn these words very quickly and pronounce them accurately with the help of their first language. However, during real classroom events, students couldn't pronounce them correctly even with my guidance over several attempts. It was at that moment that I started to realize the side effects of loanwords. Similar sounds in English help students recall and remember these loanwords without effort as they answer questions quickly during class. However, the pronunciations of these loanwords were too close to their



English so that students used exact English pronunciations to read Mandarin. For example, Pinyin “wei” in “xià wēi yí” (夏威夷 Hawaii) was [wei] but students mistakenly pronounced it like [wa:], which is similar to its English sound. (Teacher researcher’s reflective journals, Term 3, 2017)

This excerpt from the teacher researchers’ reflective journal has described the side effects of Mandarin loanwords being mistakenly read by students who were not aware of the slight differences in pronunciation. Students were expected to pronounce loanwords accurately because those Mandarin words were similar to their counterparts in English. However, this was not the case. Therefore, the teacher researcher’s guidance was necessary to explicitly pronounce those sounds and explain to the students exactly where the differences were and how slight they were.

### **6.2.2 Topic 2 lesson plan: Travel/Vehicles**

The teacher researcher also designed lessons to teach “how” to travel incorporating the vocabulary for methods of travelling. Therefore, Topic 6 was Vehicles, which included the vocabulary: “huǒ chē” (火车 train), “fēi jī” (飞机 airplane), “qì chē” (汽车 car), “dòng chē” (动车 fast train), “lún chuán” (轮船 boat), “zì xíng chē” (自行车 bicycle), “mó tuō chē” (摩托车 motorbike), and “gōng gòng qì chē” (公共汽车 bus).

The same strategy as used to analyze the vocabulary in Topic 5, Travel/Places was employed for Topic 6 vocabulary. Both the students and the teacher researcher were able to identify the vocabulary with “Similar Relation” and these findings were recorded in the middle column of Table 6-2. The teacher researcher was then able to identify the students’ responses in comparison to her own. In order to identify the

vocabulary in the “Non-relation” category, the teacher researcher needed to draw on her bilingual knowledge to identify these and record notes to assist with their teaching. (see Table 6-2).

**Table 6-2. Topic 2 Vehicles in Chinese**

	Similar Relationship		Non-relation
	Teacher researcher's perception	The student's perception	Analyzed by teacher researcher
huǒ chē (火车 train)	h+uo—g+uo (píngguǒ) che – [tʃə:]	huo – hall [hɔ:l] – who [hu:]	Compound vowels “uo”
fēi jī (飞机 airplane)	feiji-fěiji (Fiji)	fei – feed [fi:d] fei ji – fading ['feidiŋ] – pretty ['prɪti]	Compound vowels “ei” VS English “i”
qì chē (汽车 car)		qi che – teacher ['ti:tʃə]	Pinyin consonant “q”
dòng chē (动车 fast train)	d+ong— h+ong(hóngsè) — zh+ong(zhōngguó)	dong – dong [dɔŋ], – door [dɔ:] dong che – donkey ['dɔŋki]	Consonant “ch”+ “e”
lún chuán (轮船 boat)		chuan – charm [tʃɑ:m] lun chuan– lunch [lʌn(t)ʃ]	Compound vowels “uan”
zì xíng chē (自行车 bicycle)	z+i	xing-xi gua (watermelon)	Consonant “ch”+ “e”
mó tuō chē (摩托车 motorbike)	mo tuo—motor ['məʊtə]	mo – more [mɔ:] tuo che – torch ['ti:tʃə]	Compound vowels “uo”
gōng gòng qì chē	g+ong— h+ong(hóngsè)	gong – gone [gɒn]	Compound vowels “ong”

(公共汽车 bus)	— zh+ong(zhōngguó)	qi che – teacher ['ti:tʃə]	
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Table 6-2 has indicated that both students and teacher researcher became more consciously aware of drawing on the pronunciation of words previously learnt to assist with the learning of new vocabulary. For instance, the Pinyin consonant “h” + compound vowels “uo” in “huǒ chē” (火车 train) shared the same structure of “g”+ “uo” in “píngguǒ” (苹果 apple); “d” + “ong” in “dòng chē” (动车 fast train) were similar to “h” + “ong” in “hóngsè” (红色 red) and “zh” + “ong” in “zhōngguó” (中国 China). These pronunciation rules can be applied to these Pinyin when they have similar parts. However, students still considered “huǒ” similar to English “hall” [hɔ:l] or “who” [hu:], which neglected the compound vowels’ gradual pronunciation process (changing from initial vowel to the later). The students’ inaccurate pronunciations most likely resulted from the absence of these compound vowels in the English language system. Thus more effort needed to be made to support their learning of these more difficult pronunciations.

Another difficulty was when the single consonant “q” of “qì chē” was mistakenly pronounced by students as if it were similar to the English word “teacher” ['ti:tʃə]. Although the pronunciation of “q” was different to the English letter “t”, this kind of connection helped students recall and remember “qì chē”. It also made the teacher researcher reflect on her teaching practice: the replaced sounds or words suggested by students themselves, though not accurate enough, actually assisted their memory of Pinyin. Based on these student-led discussions around identifying counterparts in L1

and L2 vocabulary, the teacher researcher decided to apply other teaching strategies in order to correct students' pronunciations.

Similarly, students also tried to seek meaningful words rather than single sounds as they had done in the topic of Places to help with recall of correct pronunciation. One example included “mó tuō chē” (摩托车 motobike) being similar to the single sounds in the words “more” [mɔ:] and “torch” ['ti:tʃə][mɔ:].

### **6.3 Teaching Strategies**

As discussed in Cycle 2, effective teaching strategies impact on successful teaching and learning outcomes for students and the teacher researcher. Therefore, the teacher researcher was concerned to implement various strategies especially for the teaching of Pinyin which shared Non-relation links with English. As realized in the previous Cycles, a single method, such as the transfer technique was not viable with Non-relation vocabulary. The following sections have covered the teaching strategies for the vocabulary in this Cycle for both Similar Relations and Non-relation vocabulary.

#### **6.3.1 Counterparts from previous experience**

This teaching strategy can be divided into two categories: Transferring previously learnt Pinyin to newly introduced Pinyin and transferring new vocabulary into previously known sentence patterns.

##### ***6.3.1.1. Transferring previously learnt Pinyin to newly introduced Pinyin***

This teaching strategy was initiated in Cycle 2 during the teaching of “cǎo méi” linking to the previously introduced “mèi mei”. The shared similarities were the same consonant with the same vowels but with different tones. In Mandarin, different tones

with exactly the same letters in Pinyin can result in totally different meanings. In Cycle 3, the teacher-researcher improved on this teaching strategy by utilizing the same vowels and tones with different consonants:

As for the Pinyin “dé guó” [dɛː] (德国 Germany), the majority of my students read it incorrectly by saying [de] because of the negative transfer from English. So, in this case, I asked them what was the Mandarin Pinyin for big brother. Student answered “gē ge” [gɛː], which was absolutely correct because they had already learnt this word during Cycle 1 and we had practiced it so many times. Then I guided them by saying “this “e” in “dé guó” has the same pronunciation as the “e” in “gē ge””. Students suddenly realised the connection I made and their eyes sparkled. After that, every time when encountering “dé guó”, they thought about Pinyin “gē ge” and this encouraged them to make the right pronunciation. Although some students still said [de] when I asked them, they could correct themselves immediately after a second thought or with a hint given by me, which was a great success. Mandarin learning is a continual process which needs frequent practice. (Teacher researcher’s reflective journal, Term 3, 2017)

The data exemplified that if Mandarin Pinyin contains the same vowel but different consonants there can be positive transfer, such as “gē” and “dé”. Teaching strategies based on transfer theory need additional strategies such as linking to previous learning and explanation and hooks to strength students’ awareness of this kind of transfer.

### ***6.3.1.2 Transferring between Sentence patterns***

From Cycle 1 to Cycle 3, students had been taught Mandarin through six topics: Greetings, Family Members, Colours, Fruit, Travel/Places and Travel/Vehicles. The teacher researcher intended to make Mandarin learning a whole process by connecting each topic with several sentence patterns that would aid conversation with their peers, family members and school teachers. Sentence patterns were assessed as an effective way of learning. Below is evidence provided by the students' during a group interview at the end of Cycle 3:

TR: This term, our broad topic is “lǚ xíng” (travelling), right? We talked about cities, countries and vehicles. So, which part do you prefer?

Jack: The places.

Zara: I like the places.

Benny: I like when you said that sentence: I am going to travel with + family members.

Mel: Yes, “wǒ hé māma qù zhōngguó lǚ xíng” (I travel to China with my mother).

TR: Well done, do you like that sentence pattern?

Olive: Yes, that's what I like. Coz it's challenging and social.

Mel: Yes, like you flip through your pages and find out the words and vocabulary to make up that sentence.

Jack: It's also good to keep up your memory.

Zara: And it gets people to think a lot because I've been looking around whenever people are putting their hands up, but this sentence there isn't many people putting their hands up, and the people



In Cycle 3 the teacher researcher also identified that the sentence patterns were challenging for some students as not as many students raised their hands to contribute their own sentences when compared to other classroom activities. It challenged students as they needed to recall Pinyin from Cycle 1 in addition to the new vocabulary in Cycle 3 in order to make a meaningful sentence. The process of Mandarin teaching gradually developed from vocabulary to sentences to dialogues, which meet the social function of language: communication. Other teaching strategies were also implemented to supplement the variations suggested by the students when substituting vocabulary into fixed sentence patterns. An example was drawing on the gesture-oral strategy, which was using body gestures and actions while speaking the sentence patterns.

### **6.3.2 Non-relation teaching strategies**

As indicated previously the vocabulary with Non-relation links between English and Mandarin needed different teaching strategies for successful learning compared to the vocabulary that has a Similar Relationship. During Cycle 3 the teacher researcher developed three categories to assist student learning the pronunciation of Non-relation vocabulary. These were modelling, video and booklet.

#### ***6.3.2.1 Modelling***

As indicated in Cycle 1 and 2 findings, when there is a Non-relation link between English phonics and the Mandarin Pinyin, modelling the correct pronunciation and looking for any kind of hook for young learners to assist with their memorization of correct pronunciation is a successful strategy. However, modelling can be boring if it becomes a rote repetitive activity. At the end of Cycle 3, the teacher researcher interviewed a group of students to determine their views on what activities assisted



them the most to pronounce Mandarin accurately, particularly when there was a “Non-relation” link between English and Mandarin. An excerpt of student opinions has been provided below:

Dean: Bingo.

Zara: I like the one what helps me a lot is that sentence patterns.

Olive: I like the way like when you say it louder, and we say it quietly.  
That’s the best way how I remember.

Jack: I remember because of the videos. Because it helps me to  
remember.

Benny: I remember it with the pattern sentences.

TR: wow, you remembered so many activities.

All: Yes!

Benny: We like repeating when you say it and gets it to tell my mind.  
Like, can we get a second chance to . . .

TR: Yes, so remember when I taught you how to pronounce “mó tuō  
chē”, how do you pronounce it correctly. Benny?

Benny: Well, this is how I remember it, first you repeated it and as soon  
as you repeated it, it gets into my mind and then I know how to  
pronounce it correctly and remember it, like what the word is and  
I can repeat it and remember it, how I mean to pronounce it. And  
when you say, “Can you repeat that sentence”, you have to put  
your hands up, I find that you learn from your mistakes, say the  
words wrong or something, you correct us.

TR: Yes, I will correct you by saying that word again if you are wrong.  
That helps you to pronounce them correctly?

Benny: Yes.

Zara: And I think when you correct us when we're wrong, it really helps us because then we learn it not just saying the wrong things all the time. (Student's group interview, Term 3, 2017)

This extract from a student group interview shows that various classroom activities like the Bingo game, the Loud-Low game, videos, and sentence patterns, engaged the students during Mandarin lessons. Moreover, they also believed it was the repetition and modelling from the teacher researcher that helped them to remember and speak/read the Mandarin Pinyin accurately. The teacher researcher used the modelling strategy whereby firstly students' inaccurate pronunciations was corrected, followed by offering the correct pronunciation and then inviting the students to attempt the correct pronunciation. This three step modelling strategy can be used several times in a row to assist students to attain the correct pronunciation.

The teacher researcher also interviewed the classroom teacher to get some ideas about the teaching strategies. The classroom teacher commented in her feedback:

They like the other countries in Mandarin, learning to say the vehicles. And they do need more oral practice. So, you need to really clearly model it for them, get them to practice it to you, like pick a few, get them to say it. And then what I normally do is to turn your partner around so they can face a friend and then practice. And then I give them a minute, you can say it: turn your partner around, one of you is going to speak and the other one

will listen, and feedback, and then swap. So, I will say, alright, you've got a minute to talk to your partner, and when the time is up, you say, right, stop there, put your hands up if you're happy with your friend's pronunciation. And then, "What do I need to change?" Tell your friends what they need to work on. So, then, they're directing it towards themselves. (Classroom teacher's interview, Term 3, 2017)

The feedback from classroom teacher suggested that oral practice not only happened between teacher researcher and students, but also students themselves. After the teacher researcher clearly modelled, students themselves then also practiced pronunciation with their peers, received feedback and then swapped. In this way, students corrected pronunciation themselves, or with the teacher researcher's guidance if necessary. This also exemplified the co-teaching mode which was the intention in Cycle 3. As indicated in the students' group interview excerpt above, other teaching tools also assisted and guided them in learning the correct pronunciation of Non-relation vocabulary. These included games and videos.

#### ***6.3.2.2 Video as an intuitive and effective teaching method***

Videos also assisted to engage students' learning by introducing exciting music and vivid images compared to oral modelling from the teacher researcher. Students' opinions on this strategy was provided during the student group interview as demonstrated below:

TR:     What else I can do to make Chinese easier? Do you think more videos will help?

Benny/Zara: Yes, more videos and more games.

Olive: I don't think she needs to change anything. Just like the way you're teaching us, it's good.

Dean: Maybe more videos that give us more ideas like . . .

Mel: Maybe when we don't understand what you're teaching, then give us a video so we can see what the actual thing is.

Mel: Maybe you could tell us if we could understand or not, say, "Put your hands up if you don't understand".

Zara: And sometimes almost everybody puts their hands up, instead of choosing people who put their hands up, you can choose those who don't. Then you can give them a try so they actually get to practice. (Students' group interview, Term 3, 2017)

The data from the students' group interview supported the decision made by the teacher researcher to adopt the use of video as one of her teaching strategies especially when teaching content which was difficult for students to completely understand. Students were then able to observe the actual behaviours through lively cartoon images. Student's responses also suggested teaching strategies for the teacher researcher. These were asking questions to check students' understanding and choosing students to respond from those who do not raise their hands. It was evident that students could actually think about others instead of only caring about themselves.

Videos also engaged students according to the mentor teacher's feedback:

Katy: And video, because when you've got a video on, you could step back, you are not teaching, you're watching. You can see students at their desk and you can say, "Right, stand up, do this one for me

please. All right, haven't got it? I will come back to you", Or "I will give you one minute then I'll go back to you", "Can you give me that answer please?" . . . Go back to that person standing, "Alright, what do you think?" So, you draw them in, you're not saying, "Stand up, you've been very naughty". You don't really want to do that, you want engagement, so "Stand up, I am going to give you a little bit of thinking time".

TR: This is really a good way to engage them.

Katy: It is, and that's a nice way. You're not putting them down, you're not saying, "Stand up, you are silly and stupid". Right?

TR: Yes, of course. (Mentor teacher's interview, Term 3, 2017)

The mentor teacher's suggestions reflected another advantage of playing a video. When a video was playing, the teacher researcher became more of an observer of the students and could identify whether students were engaged or not. If students were not engaging with the video, she would ask that student a question and encourage them positively rather than making a negative reprimand and embarrassing the child. Although strategies such as videos are popular with the students it is the combination of various strategies that will result in effective teaching and learning. In the next section the introduction of an activity booklet was used to engage students.

#### ***6.3.2.3 Regarding learning as a whole process by providing a booklet***

During any teaching and learning episodes it is inefficient if we forget previously-learned knowledge while encountering new knowledge. In order to address this, the teacher researcher designed a booklet for students, which contained Pinyin introduced

in Cycles 1, 2 and 3. This teaching strategy introduced by the teacher researcher also received positive feedback from the classroom teacher who commented:

...And the booklet for my class, that is appropriate for these guys because they're intelligent students so they can follow the book, and be able to see what they're going to learn in the next couple of lessons, that's really good so they could follow it and they could track. . . . And sometimes it's easy even though they have their workbooks there, that little book there signifies to them this is just exactly what we're learning this time. And this is good for them to be able to go back and review and to flick through the pages if they need to as all the information is there for them . . . So, in that way they're revising what they've learnt. And there is just a little task for you, and they can put in their book. And you can go back, and I can go back, to see their work. And it is nice for their parents to see their work as well.

(Year 1 classroom teacher's feedback, Term 3, 2017)

The data from the classroom teacher's feedback confirmed the booklet was appropriate and enabled students to review previously learnt vocabulary and activities as well as going forward in the booklet to see what was coming up. Students flicked through the pages to find all the information they needed, for example, when making up sentences, and the teacher researcher, the classroom teacher, and even the parents could go back to see the students' work in the booklet. This booklet also acted as a tool for revision. The classroom teacher and mentor teacher both emphasized the significance of revision, which plays an important part in students' language learning. With the help of this booklet, students could learn and practice their Mandarin by reviewing the vocabulary, practicing known pronunciation and communicating in real life contexts in and out of school.

## **6.4 Discussion**

An analysis of the data collected throughout Cycle 3 has revealed three themes: (1) Rationale on the teaching topics: Why these two teaching topics were chosen, (2) Effectiveness of learning vocabulary through context, and (3) The teacher's role in SCL. These three themes will now be discussed in relation to this Chapter's aim of implementing a Co-teaching Mode for Mandarin learning.

### **6.4.1 Rationale for the teaching topics**

There has been research around the effectiveness of topic selection based on students' real life experiences when learning a second language. Larrota (2011) described the implementation of personal glossaries in a community program offering English as second language (ESL) classes to Spanish speaking adults. She then invited Spanish speaking adults in this ESL program to see if personal glossaries helped them communicate in real-world situations. Adults who participated in this program gave feedback. One of them said she preferred a new word in class and then she would recognize and speak it in real life. The need to use language in real life, has contributed to students being very engaged and attentive in class. Another adult said writing sentences helped him remember the new words, which indicated that contextual learning was effective (Larrota, 2011). Therefore, in the selection of the teaching topics in Cycle 3 it was necessary to allow the students to suggest their opinions about what was a reality in their lives and what interests they had at the moment. It was not a total surprise when the students chose Travel as the fifth topic as indicated by the teacher researcher's reflective journal entry below:

I had heard some daily talk between some classroom teachers during my lunch break. They talked about travelling and said their students often had chances to travel. Incidentally students were learning travelling in their L1 as required by the English curriculum for primary school. It was not surprising that students suggested this topic. When designing lessons, I asked the students “Where would you like to travel during the holidays?” Students answered various places and I recorded their answers which contributed to the content of the topic Travel/Places. The topic of vehicles was connected to the former topic because students have to take various transportation vehicles to their destinations. In order to build on previously learnt vocabulary I combined what students learnt in Cycles 1 and 2 with new Pinyin in Cycle 3 and designed a booklet about Travelling, which contained vocabulary related to the “who, where, how and what” of Travelling. For “who”, it related to Family Members (Cycle 1); “where” and “how” were travelling to what places and by which transportation vehicles (vocabulary in Cycle 3); and “what” included what fruit (and its colour) that they may buy during travels (Cycle 2 vocabulary), I used examples of sentence patterns to combine each specific topic (Teacher researcher’s reflective journal, Term 3, 2017)

The excerpt from the reflective journal above indicated that the teacher researcher encouraged the students to choose the teaching topics that would cater to their interests and closely connected to their daily lives. Students also took active roles in suggesting the overseas places they thought interesting as destinations. If students are not motivated to learn Mandarin, then whatever teaching strategies or classroom management strategies are in place will be less meaningful.



#### **6.4.2 Teacher's role in the co-teaching mode**

Researchers have debated the pros and cons of teacher-centered and student-centered teaching for many years (Syed, 2015). During Cycle 1 and Cycle 2, the teacher researcher implemented teacher-centered and a more student-centered teaching mode respectively. These two teaching modes have their advantages and disadvantages. Therefore, in Cycle 3, the teacher research combined those two teaching modes to include a combination of both teacher and students' participation, and termed this the Co-teaching Mode. Syed (2015) suggested from research findings that students learning languages will model what is taught by their teachers, which in this research supports the need for the teacher researcher to provide accurate pronunciation of the vocabulary to be taught to young learners. In Syed's (2015) research it was noted that students who had initially learnt inaccurate English pronunciation from a teacher with a Pakistan accent, were unable to relearn pronunciation even from a native English speaking teacher. Therefore, during Cycle 2, when more student-centered teaching was implemented, it was still important to maintain a significant teacher's role in the teaching of Mandarin pronunciation.

In Cycle 1, the teacher researcher chose the teaching topics and designed the teaching content from her own perspective as she had no background knowledge about the students existing levels of Mandarin achievement or their interests. A teacher-centered mode was implemented during Cycle 1. This mode had the advantage of having more control over students' learning but denied students' independence and creativity. Thus in Cycle 2 the teacher researcher trailed a more student-centered mode with the purpose of strengthening students' awareness of using English to learn Mandarin. The student-centered mode involved the students in selecting a topic for study and they were also involved in categorizing the vocabulary lists for each topic according to any

similar or contrast relationship between sounds in English and Mandarin. Based on the findings at the conclusion of Cycle 2, the teacher researcher decided that in Cycle 3 there would be more emphasis on both teacher's and students' role in developing the teaching content, and strategies. This was reflected in an entry from the teacher researcher's reflective journal:

As for the Pinyin “qì chē”, students said it was similar to the English word “teacher”. I was so surprised because I thought the “qi” sound was absent in English. But “qì chē” and “teacher” do have something in common. I reflected on my teaching strategies to guide students to read accurately with English counterparts. I used hand gestures and told them: “Put your hands in front of your mouth, when you pronounced ‘qì chē’, you should feel the airflow clearly”. I asked students to figure out the differences between those words. Students followed me by putting their fingers in front of mouth while pronouncing, which helped them intuitively feel the characteristics of its pronunciation. (Teacher researcher's reflective journal, Term 3, 2017)

The data above illustrated how students began to recognize counterparts in English with less direction from the teacher researcher. The English word “teacher” was then utilized to learn the Pinyin “qì chē”. Although the consonant “q” was actually absent in English, the students applied a word they thought was close enough. Compared to English, the consonant “q” also was different in the shape of mouth and airflow.

Students took an active role in identifying the word “teacher” and this inspired the teacher researcher to work with the students to use the word “teacher” to assist the students' to remember the Pinyin “qì chē”, even though it was not totally correct. This

was one example of how the students and teacher researcher worked successfully together in the co-teaching mode.

### **6.4.3 The relationship between teaching and research**

The teacher researcher taught Mandarin Pinyin in a Primary school, and collected data from target students, the classroom teacher, analyzed data from students' learning and their feedback and made comments in her own reflective journals. This is an example of the teacher researcher researching her own practice. Throughout Cycles 1, 2 and 3 the teacher researcher kept the main research question in mind, that is: How can students' L1 (English) be employed to facilitate the pronunciation acquisition in their L2 (Chinese) learning? The findings from each Cycle in this research have been discussed in terms of the three contributory research questions in the next Chapter in section 7.2.

## **6.5 Conclusion**

Chapter 6 has described Cycle 3, the final Cycle in a three-Cycle action research study. Action research as a methodology was chosen as it allowed the opportunity for the teacher researcher, herself a beginning Mandarin teacher in the Australian context, to improve her teaching and learning processes and strategies over time. Throughout Cycles 1, 2 and 3 the vocabulary to be taught centered around the topics chosen by the teacher researcher or the students (Cycles 2 and 3), as the traditional method of Mandarin teaching, introducing vocabulary sorted into single consonants and vowels, was not appropriate for non-background learners to start learning Mandarin Pinyin. The topics provided an interesting context within which the students could begin to learn and pronounce the chosen vocabulary. The challenge with this method was that

when “Non-relation” vocabulary was introduced as relevant to the topic, students had difficulty with pronunciation, the problem only able to be solved using the rules of pronunciation. At times the teacher researcher considered the advantage of an earlier introduction of some initial pronunciation rules. However, considering the age and cognitive level of the students, teaching Pinyin based on each topic met the needs of both the students and the teacher researcher. Continuing teaching the Pinyin relevant to the chosen topic continued through Cycle 1 to Cycle 3 and the vocabulary developed from words only to sentence patterns which enabled communication and dialogue.

During each cycle of the research, the teacher researcher was armed with new inspiration to improve the teaching strategies implemented over the course of the three Cycles. She assumed in the beginning that, if a teaching strategy adopted would achieve satisfactory teaching outcomes and research results, this strategy was effective. However, it was realized that the efficiency of the teaching strategies was effected by various factors including students’ interest, motivation, age group, and the physical environment as well as the teaching content and classroom activities.

The following Chapter has summarized the findings from Chapters 4, 5 and 6 into a final summation specifically addressing the research questions.

## **CHAPTER 7**

### **CONCLUSION**

This thesis explored the application of a language transfer teaching approach to make Chinese learnable for young beginning second language learners. The context for this research was the ROSETE program whereby the teacher researcher studied for a Master degree whilst undertaking a Chinese language teaching assignment in a local NSW Public School. The focus of the language transfer was in the pronunciation of Chinese Language—Mandarin Pinyin. The overriding research question investigated was:

How can students' L1 (English) be employed to facilitate the pronunciation acquisition in their L2 (Chinese) learning?

The contributory questions were:

1. How does English (L1) relate to Chinese Mandarin (L2) in pronunciation, including both consonants and vowels, according to Ringbom's (2007) L1 and L2 relations (similarity, contrast, and zero)?
2. How do such L1 and L2 relations impact English-background Australian students' learning of Chinese language pronunciation?

3. What teaching strategies can be developed to facilitate the Chinese language learning for non-background Australian school students?

## **7.1 Chapter Overview**

In this thesis, Chapter 1 introduced the background and significance of this study, proposed the research questions, research aims, and research outcomes and provided background information on the teacher researcher. As this research was situated within the ROSETE program, background information on this longitudinal program have also been included in Chapter 1.

Chapter 2 has provided a review of the literature that was relevant and has informed this research. The definitions and classifications of language transfer have been included. Drawing upon Ringbom's (2007) theory (there are similar, contrast and zero relations between languages), these relationships between English and Chinese were considered and introduced from the perspective of pronunciation in language teaching.

Chapter 3 outlined 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, trustworthiness, prolonged engagement, member checking and triangulation, were also discussed in this chapter. Research data were collected from observation notes, observation form, a self-reflective journal, lesson plans, and interviews both with teachers and students. In brief, the entire study was carried out according to the action research cycles of: planning, observation and reflection, teaching implementation, and evaluation.

Chapter 4 presented the data analysis, from the first Cycle of teaching. The data revealed that this Cycle had emphasized teacher-centered strategies and

implementation throughout the teaching of the two topics, Greetings and Family Members. In this Cycle Ringbom's (2007) categories were tested as vocabulary and phrases were presented to the students based on their similar, contrasting, and zero relations between the English phonics and the Mandarin Pinyin. As the Similar Relations were most easily learnt by the students more successful pronunciation of the chosen vocabulary was achieved through these more easily identified hooks. The teaching strategies developed to assist with the language transfer to make Chinese learnable were also explained in Chapter 4. However, at the conclusion of Cycle 1 teaching it was clear that the vocabulary with contrast and zero relations had not received enough exploration and thus teaching strategies were not developed well to facilitate students' learning to pronounce these Mandarin Pinyin.

Chapter 5 presented the data analysis from Cycle 2 of teaching Mandarin for accurate pronunciation. Changes to the approach taken in Cycle 2 were based on the findings from Cycle 1 and therefore more student-centered strategies were introduced in the implementation stage. Firstly, students were engaged in choosing the teaching topics of Colours and Fruits. Students were involved in identifying the similar and non-relational links between the English and Mandarin Pinyin for the chosen vocabulary relevant to the topics. In this chapter, "Similar Relation" was redefined based on Cycle 1 findings, to condense Ringbom's (2007) similar and contrast categories into one. Any counterpart between the L1 (English) and L2 (Mandarin Pinyin) was classified as having a "Similar Relation". The teaching strategies implemented were also highlighted in this Chapter as those which enabled phonetic transfer to make Mandarin Pinyin more accurately pronounced by the beginning learners.

Cycle 3 of the teaching and research was presented in Chapter 6. Based on Cycle 2, the teacher researcher intended to engage the students more in the planning and

implementation of the Mandarin learning and presented this approach as a Co-teaching Mode. The students were involved in choosing the topics and the vocabulary lists for Cycle 3 teaching. In this Cycle the vocabulary lists across the two topics Travel/Places and Travel/Vehicles were categorized into “Similar Relations” and “Non-relation” and students again compared the Mandarin Pinyin to their familiar English phonics to identify where any links would enable the transfer theory to assist with their pronunciation learning. The teacher researcher needed to analyze the “Non-relation” vocabulary as often there was no English equivalent. Teaching strategies were developed to engage the students with more hands-on activities and students were involved in an assessment of the Cycle 3 content and strategies.

Chapter 7 will now continue with the findings of this study in relation to the research questions, acknowledging the limitations of this research and offering suggestions for further study to advance these findings.

## **7.2 Findings in Relation to the Research Questions**

There are three contributory research questions of this study: (1) How does English (L1) relate to Chinese Mandarin (L2) in pronunciation, including consonants and vowels, according to Ringbom's (2007) L1 and L2 relations (similarity, contrast, and zero)? (2) How do such L1 and L2 relations impact English-background Australian students' Chinese pronunciation learning? (3) What teaching strategies can be developed to facilitate the learning of Chinese for non-background Australian school students?

These three contributory questions worked together to provide an answer to the main research question of this study: How can students' L1 (English) be employed to



facilitate the pronunciation acquisition in their L2 (Chinese) learning? The findings from Chapters 4, 5 and 6 have been consolidated under the following two headings relating to “Similar Relation” research data (section 7.2.1) and “Non-relation” data (section 7.2.2)

### **7.2.1 “Similar Relation” facilitates the Chinese pronunciation learning of English-background Australian students**

In order to answer the overall research and contributory questions, the relations between English phonics and Mandarin Pinyin in terms of teaching mandarin pronunciation were explored by designing three cycles of research. In each cycle vocabulary with “Similar Relation” between English phonics and the Mandarin Pinyin was more easily acquired by beginning students. Each contributory research question has been discussed below in more detail.

#### ***7.2.1.1 Contributory research question (1)***

The first contributory research question was: How does English (L1) relate to Chinese Mandarin (L2) in pronunciation, including consonants and vowels, according to Ringbom's (2007) L1 and L2 relations (similarity, contrast, and zero)?

In Cycle 1 the teacher researcher followed Ringbom's (2017) categories for L1 and L2 relationships by analyzing the vocabulary list for the topics Greetings and Family Members and identifying and listing the vocabulary into each of the three categories (see Table 4-1 and 4-2). Six out of the nine words/phrases in the vocabulary list for Greetings had a similar phonetic link, while six out of ten words/phrases in the Family Members topic had similar phonetic transfer from Mandarin to English. The vocabulary list in Cycle 2 was similarly analyzed, however students identified the

“Similar Relation” in both topics Colours and Fruit. Students identified eight out of twelve words in the Colours topic as being similar and nine out of thirteen words had phonetic links in the topic Fruit (see Tables 5-1 and 5-2). The teacher researcher was able to further categorize the links identified in Cycle 2, into similarities of vowels and consonants (see again Table 5-1 and 5-2). In Cycle 3 all the words in the vocabulary lists for both topics were identified as having some phonetic links between the English and Mandarin. This evidence has indicated that there is a phonetic relationship between English and Mandarin for many words.

As the research continued into Cycle 3 further similarities were noted through the identification of Chinese words borrowed from English, loanwords, these being purely phonetic loans and phenetic loans with semantic associations (see 6.2 in the topic Travel/Places). Whilst the Pinyin for these loanwords looked very similar to English there were still some challenges for students in accurate pronunciation and the influence of negative transfer was noted (see 6.2.1 and 6.3.1).

#### ***7.2.1.2 Contributory research question (2)***

The second contributory research question asked: How do such L1 and L2 relations impact English-background Australian students’ Chinese pronunciation learning?

Throughout the three Cycles of research, students became more involved with the teacher researcher in looking carefully at the Mandarin Pinyin in order to identify any “Similar Relation” with English words and sounds. Students’ responses were taken seriously and recorded against the Mandarin Pinyin (Tables 5-1, 5-2, 6-1, 6-2). Students found the pronunciation was then not as difficult as they thought previously during their Mandarin learning. They were able to draw on the sounds that were similar in the two languages. The transfer strategy developed by the teacher researcher’s

approach in Cycles 2 and 3 strengthened students' awareness of the relations between English and Mandarin.

This research also recorded a positive impact for students' learning when they could draw on previously learnt Mandarin in activities that related to new vocabulary learning. The Sentence Patterns activities (see 5.3.1.2 and 6.3.1.2) provided students with the opportunity to substitute already learnt Mandarin words/phrases into a set sentence pattern. Student feedback in section 6.3.1.2 indicated they enjoyed this activity (assuming then it was not difficult for them).

Students were eager to respond to the teacher researcher's attempts to make Mandarin learnable by providing hooks through the transfer of phonetic similarity between the two languages.

### ***7.2.1.3 Contributory research question (3)***

The teaching strategies and activities listed in the dot points below are offered in answer to the contributory research question: What teaching strategies can be developed to facilitate the learning of Chinese for non-background Australian school students? as these were implemented successfully by the teacher researcher, refined and improved across the three teaching and research Cycles:

- Set up an interesting classroom environment where Mandarin vocabulary is displayed;
- Analyze the vocabulary for teaching and identify those words with direct/similar phonetic links (See Tables 4-1, 4-2; 5-1, 5-2; 6-1, 6-2).  
These can be taught first as students should have immediate success with accurate pronunciation;

- Display the similar phonetic link for pronunciation;
  - Allow the beginning students to record the phonetic hook as they learn the Pinyin. For example, “ni” = knee; “shang” = shung;
  - Display the English phonetic link for pronunciation on flashcards;
- Use an Observation Form/Sheet (for example see 4.3.1) to gauge students’ pronunciation successes to determine which vocabulary needs further teaching;
- Plan activities where pronunciation practice is linked to visual and musical resources and incorporate movement and games (Bingo, Rabbit Squat Game, Sentence Patterns) during practice sessions (Student feedback supported the success of these language learning approaches – see 5.4.1; 6.3.1.2; 6.3.2.1);
- Move from teacher-centered to student-centered or co-teaching modes to engage students’ interests and previous knowledge more;
- As the students’ progress provide them with a “Booklet” at the beginning of a new teaching period. This can be used by the students as a reference as well as engaging them with upcoming lessons (see the positive assessment of this strategy by the classroom teacher in section 6.3.2).

### **7.2.2 “Non-relation” – challenges to pronunciation**

In each of the three teaching and research Cycles the teacher researcher investigated vocabulary that was chosen as relevant to the topics, but which had no phonetic links

between the English and Mandarin. In Cycle 1, Ringbom's (2007) category "zero" relation was identified in the analysis of the vocabulary lists (Tables 4-1 and 4-2). In Cycles 2 and 3 the teacher researcher redesigned Ringbom's (2007) categories and proposed "Non-relation" should replace "zero" as the category for no phonetic link (or the Mandarin sounds being totally absent from the English phonetic system).

#### ***7.2.2.1 Contributory research questions (1)***

In terms of the first contributory research question: How does English (L1) relate to Chinese Mandarin (L2) in pronunciation, including consonants and vowels, according to Ringbom's (2007) L1 and L2 relations (similarity, contrast, and zero)? as it relates to "zero" / "Non-relation" sounds and vocabulary between English and Mandarin, there were many "zero" category words identified in this research where transfer theory could not be used to support students' Mandarin pronunciation learning. In Cycle 1, three out of nine words in the topic Greetings, and four out of twelve words in the topic Family Members had "zero" connection. Certain consonants and compound vowels were identified by the teacher researcher as having some elements of "Non-relation" in Cycles 2 (21) and in Cycle 3 (14) (see Tables 5-1, 5-2 and 6-1 and 6-2).

#### ***7.2.2.2 Contributory Research Question (2)***

In answer to the second contributory research question: How do such L1 and L2 relations impact English-background Australian students' Chinese pronunciation learning? the teacher researcher identified that supplementary strategies were needed to assist students' learning, as transferability was not possible. Having "Non-relation" / "zero" links between the languages resulted in increased challenges for the young

beginning learners. Efforts by the teacher researcher to overcome this has been addressed in the following section.

### ***7.2.2.3 Contributory research question (3)***

As the teacher researcher could not avoid vocabulary with “Non-relation” between the English phonetic system and Mandarin, several strategies and activities were developed to assist the students with more challenging Mandarin pronunciation. To answer the third contributory research question: What teaching strategies can be developed to facilitate the learning of Chinese for non-background Australian school students? in the context of “Non-relation” between the languages, the strategies and activities developed throughout the three Cycles have been listed below:

- Intuitive-Imitative Approach (see 4.3.2.3) – Listen and Imitate/ Teacher Modelling the correct pronunciation;
- Modelling not as a rote oral chanting activity but linked to visual resources. For example, art activities/worksheets (see 4.3.2.4.2) and videos (see 6.3.2.2);
- Varied opportunities for practicing difficult pronunciation for example role plays (see 4.3.2.4.3) and using peers as mentors for pronunciation practice (see 6.3.2.1);
- Breaking sounds into small elements (see 5.3.2.1) and providing assistance to shape the mouth and tongue to create sounds absent in English (see 5.2.3 and 5.3.2.1).

Student feedback recorded in section 6.3.2.1 provided evidence that the students acknowledged the need for teacher modelling in order for them to articulate correctly and to memorize the pronunciation of more challenging Mandarin words.

### 7.3 Limitations

Two limitations have been identified as possibly effecting the value of this study. Firstly, there are limitations in the number of phonetic similarities that can be identified between English and Mandarin as the vocabulary for teaching increases. At the commencement of this research, it was planned to find the phonetic similarities between English and Mandarin. The assumption was that second language learner's cognitive load would be reduced. In Cycle 1 it was effective as most vocabulary was either "similar" or "contrast" according to Ringbom's (2007) categories. However, after the implementation of Cycle 2 and Cycle 3, it was found that phonetic similarities in loanwords resulted in negative transfer, and also Mandarin words where the sounds were absent in the English phonetic system were challenging for students. In this study, phonetic loanwords were of major concern as the students thought they were correct, although their approximations in pronunciation were not totally accurate. In this study an example was the word "yì dà lì" (Italy). A common phenomenon was that students read the Mandarin words "yì dà lì" as "yì tà lì", which might be influenced by the negative transfer of English. This Mandarin word and others introduced in the topic "Travel/Places" were borrowed from the English language system, so the Mandarin pronunciations were extremely similar to English. However, it was incorrect to read those Mandarin exactly the same as English. This phenomenon was not anticipated as a challenge. However, it meant that negative transfer created some difficulty for students and required more detailed modelling.

Similarly, for those sounds not in the English phonetic system, such as the two-/three-vowel compound finals and nasal compounds of Mandarin did not receive enough attention during the planning stage. While pronouncing two-/three-vowel compound

finals, the position of the tongue and the shape of the lips should change gradually from the initial vowel to the final one. The pronunciation of nasal compounds should move gradually from the tongue position of the front vowel to the tongue position of the nasal consonant at the back, and finally becomes nasal sound completely (Pu Tong Hua Learning Material, 2018). Students in this research had no previous experience in the rules of this type of pronunciation process. These student participants were beginning Mandarin learners aged six and seven years who were also in the beginning stages of learning to read and write in English. The complicated processes of pronouncing the nasal compounds and two-/three vowel compounds were noted as a limitation as being beyond their cognitive level.

Secondly, the teacher researcher in this project was a bilingual speaker. Based on her bilingual experience and expertise, she initially designed the teaching and research processes based on Ringbom's (2007) similar, contrast, and zero relations between L1 and L2. The transferring teaching strategies applied in this research required specific bilingual knowledge. This research may not be easily replicated unless it is attempted by a bilingual teacher with Chinese background in an Australia context with competence in Mandarin teaching.

## **7.4 Suggestions for Further Study**

This study explored the phonetic similarities between an Asian language (Chinese) and a European language (English). Language transfer might also occur between Asian languages (Korean, Japanese), not only between L1 and L2, but also L1 transfer to L3, L4, and so on. Further studies in this field would be necessary to understand more fully the potential of language transfer as a teaching method. This study analyzed three relations between Mandarin and English—similar relation, contrast relation, and zero



relation—based on Ringbom’s (2007) theory. The teacher researcher then redefined these relations into two categories: “Similar Relation” and “Non-relation”. At the conclusion of this research the teaching of pronunciation of vocabulary in the “Non-relation category” for young beginning learners needed further attention to devise more engaging strategies that assist with the pronunciation of these challenging words. There is scope for further study in this area.

Finally, the Pinyin system used to assist with the teaching of pronunciation does not include tones. There are actually four tones in Mandarin and the change in the tone of a syllable indicates a change in meaning, which might have influenced the findings of this study. Further studies could explore the effects of tones on the phonetic similarities between Mandarin and English.

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## **APPENDICES**

## **Appendix 1: Approval of Human Research Ethics Committee**

Locked Bag 1797



## Appendix 2: State Research Approval Process Approval



Miss Changchang Zhang  
1 Hythe Street  
MOUNT DRUITT NSW 2770

DOC17/573383  
SERAP 2017164

Dear Miss Zhang

I refer to your application to conduct a research project in NSW government schools entitled *L1/L2 transfer for non-background Chinese learners' in their L2 pronunciation acquisition*. 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-2018.

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:

Researcher name	WWCC	WWCC expires
Changchang Zhang	WWC1151795V	28-Oct-2021

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](mailto: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



Liliana Ructtinger  
Relieving Manager, Research  
9 June 2017



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 5060 – Email: [serap@det.nsw.edu.au](mailto:serap@det.nsw.edu.au)

## Appendix 3: Participant Information Sheets (Parents/Caregiver)

WESTERN SYDNEY  
UNIVERSITY



### Participant Information Sheet – Parent/Carer

**Project Title:** Language transfer of non-background Chinese learners' pronunciation acquisition

**Project Summary:**

Your child is invited to participate in a research study being conducted by Miss Changchang Zhang, under the supervision of Dr Katina Zammit and Dr Jinghe Han, School of Education, Western Sydney University. The research explores teaching strategies for the learning of Chinese pronunciation, specifically how children's English pronunciation influences their transfer into learning Chinese pronunciation.

**How is the study being paid for?**

Support for the study comes from the Ningbo Municipal Education Bureau, NSW Department of Education and the School of Education, Western Sydney University.

**What will my child be asked to do?**

Your child will be involved in learning Chinese as part of their normal class lessons.

During lessons, your child will be observed, and notes taken about their learning. Your child may be audiotaped speaking Chinese.

At the end of the term your child may be involved in a group interview with other children from the class about their learning of Chinese pronunciation and how it has or hasn't been influenced by their knowledge of English. The group interview will be audiotaped.

**How much of my child's time will he/she need to give?**

The research is undertaken during normal class lessons on Chinese which will occur once a week. Observations and audio-recording will not impact your child's time as they are being completed as part of the regular classroom routines. The group will be held at the end of each term and take 15-20 minutes. The group will be scheduled based on the advice from the class teacher.

**What benefits will my child, and/or the broader community, receive for participating?**

While there may be no direct benefit to your child, they will gain greater knowledge of Chinese language and improve their pronunciation. They will have an opportunity to provide feedback about their experiences of learning Chinese and thus have input into choice of strategies.

**Will the study involve any risk or discomfort for my child? If so, what will be done to rectify it?**

Your child may feel uncomfortable during the group interview. However, prior to the questions being asked, all children in the group will be informed about the protocols i.e. all contributions are accepted and no negative comments are to be made about another students' contribution. They will also be reminded that they can withdraw at any time.

**How do you intend to publish or disseminate the results?**

Pseudonyms will be used for all children. The results will be disseminated through a Master of Philosophy thesis, in conference papers, journal articles, and in seminar and conference presentations.

## Appendix 4: Participant Information Sheets (Classroom Teachers)

WESTERN SYDNEY  
UNIVERSITY



### Participant Information Sheet – Teachers

**Project Title:** The language transfer of non-background Chinese learners' pronunciation acquisition

**Project Summary:**

You are invited to participate in a research study being conducted by Miss Changchang Zhang, under the supervision of Dr Katina Zammit and Dr Jinghe Han, School of Education, Western Sydney University. The research explores teaching strategies for the learning of Chinese pronunciation, specifically how children's English pronunciation influences their transfer into learning Chinese pronunciation.

**How is the study being paid for?**

Support for the study comes from the Ningbo Municipal Education Bureau, NSW Department of Education and the School of Education, Western Sydney University.

**What will I be asked to do?**

You will be asked to provide feedback on the design of lessons and your observations about students' engagement and learning of Chinese pronunciation after each lesson, in particular the teaching and learning strategies. At the end of each of each term you will be interviewed about the content and related activities and your view on students' learning of Chinese pronunciation being trialled in class.

**How much of my time will I need to give?**

The research is undertaken during normal class lessons on Chinese which will occur once a week. Feedback after each lesson will take approximately 15-20 minutes. The end of term interview will take approximately 20-30 minutes.

**What benefits will I, and/or the broader community, receive for participating?**

There is no direct benefit to you, while you may benefit from reflecting on the researcher's practice of teaching Chinese pronunciation and the relationship to students' knowledge of English pronunciation.

**Will the study involve any risk or discomfort for me? If so, what will be done to rectify it?**

There should be no risk or discomfort to you during the study. If there is any discomfort please contact the researcher's supervisor, Dr Katina Zammit on 9772 6291 or k.zammit@westernsydney.edu.au

**How do you intend to publish or disseminate the results?**

Pseudonyms will be used for all teachers. The results will be disseminated through a Master of Philosophy thesis, in conference papers, journal articles, book chapters and in seminar and conference presentations.

**Will the data and information that I have provided be disposed of?**

The data and information will be disposed of 5 years after the completion of this project.

**Can I withdraw from the study?**

Participation is entirely voluntary and you are not obliged to be involved. If you do participate you can withdraw at any time without giving any reason.

## Appendix 5: Participant Consent Sheets (Parents/Caregiver)

WESTERN SYDNEY  
UNIVERSITY



### Consent Form – Parent/Carer

**Project Title:** The language transfer of non-background Chinese learners' pronunciation acquisition

**I hereby consent my child to participate in the above named research project.**

**I acknowledge that:**

- I have read the participant information sheet (or where appropriate, have had it read to me) 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 my child:**

- ☐ *being observed and notes during their learning*
- ☐ *being audio recorded as they practice speaking Chinese*
- ☐ *possibly participating in a group interview at the end of each term*
- ☐ *having the interview audio recorded*

**I consent for my child's data and information provided to be used for this project.**

**I understand that my child's 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 my child can withdraw from the study at any time without affecting my child's relationship with the researcher/s, and any other students involved, now or in the future. However, the data collected up to the time of withdrawal will form part of the data set as it is not possible to take out an individual child's responses as these may have been mixed in with other children's responses.**

**Signed:**

**Name:**

**Date:**

**This study has been approved by the Human Research Ethics Committee at Western Sydney University. The ethics reference number is: H**

**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 Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email [humanethics@westernsydney.edu.au](mailto:humanethics@westernsydney.edu.au).



## Appendix 6: Participant Consent Sheets (Classroom Teachers)

WESTERN SYDNEY  
UNIVERSITY



### Consent Form – Teachers

**Project Title:** The language transfer of non-background Chinese learners' pronunciation acquisition

**I hereby consent to participate in the above named research project.**

**I acknowledge that:**

- I have read the participant information sheet (or where appropriate, have had it read to me) 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 collection of my feedback on lessons*
- ☐ *participating in an interview at the end of each term*
- ☐ *having the interview audio recorded*

**I consent for my data and information provided to be used for this project.**

**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 relationship with the researcher/s, and any organisations involved, now or in the future.**

**Signed:**

**Name:**

**Date:**

**This study has been approved by the Human Research Ethics Committee at Western Sydney University. The ethics reference number is: H**

**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 Research Engagement, Development and Innovation (REDI) on Tel +61 2 4736 0229 or email [humanethics@westernsydney.edu.au](mailto:humanethics@westernsydney.edu.au)

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

## **Appendix 7: Interviews Questions for Classroom Teachers**

### **Potential questions for classroom teachers' feedback on lessons and/or end of term interview.**

1. What did you think of the lessons planned to teach Chinese pronunciation? (1-10 points)
2. From your observations, can you comment on the students' engagement in learning Chinese pronunciation? How? (1-10 points)
3. What feedback do you have about the design of the lesson or lessons, in particular the strategy or strategies trialed to teach Chinese pronunciation? (1-10 points)
4. What strategies do you think helped or didn't help students with their learning of Chinese pronunciation? (1-10 points)
5. How effective do you think were the strategies used that made a connection between English and Chinese pronunciation to students' learning? (When teaching 'hóngsè—red', the mandarin teacher Miss Zhang link 'hong' in hongkong to hóngsè; 'cheng' is similar to English word 'chain' [tʃeɪn] or a part of the word 'change' [tʃeɪn(d)ʒ]; 'lǚ se' sounds like 'loose' [lu:s]).
6. Do you think students could make the connection? Do you think it enhanced their pronunciation of Chinese? (1-10 points)
7. What further suggestions or comments would you like to add about the teaching content and related activities?

## **Appendix 8: Interviews Questions for Students**

### Potential questions for student group interview

What topics did you find most interesting? Why/ why not?

- Greetings
- Family members
- Colors
- Fruits

What activity/ies did you find helped you the most to speak Chinese accurately?

How did connecting learning to speak Chinese to how you talk in English influence your learning of speaking Chinese? How did comparing the sounds in English and Chinese influence your learning? (for example, Chinese sounds represented by “q-” were similar to [gɜ] sound in “good” when teaching mandarin ‘ge-ge’ )

What else would you like me to do to make learning easier? More video, games, or worksheet?