Scaffolding Chinese Teaching and Learning

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1 October, 2013
DECLARATION

I declare that except where due acknowledgement has been made this research thesis 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 Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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ZHOU Lan
1 October, 2013
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LIST OF ABBREVIATIONS

DECS: Department of Education and Children’s Services
DEC: NSW Department of Education and Communities
DET: Department of Education and Training
NALSSP: National Asian Languages and Studies in Schools Program
NEAF: National Ethics Application Form
NMEB: Ningbo Municipal Education Bureau
NSW: New South Wales
NSW DET: New South Wales Department of Education and Training
SERAP: State Education Research Approval Process
ROSETE: Research Orientated, School Engaged, Teacher Education
UWS: University of Western Sydney
VTR: Volunteer Teacher Researcher
ZPD: Zone of Proximal Development
ABSTRACT

Scaffolding is an important part of language teaching and learning. It is a metaphor for a dynamic process intended to enable teachers to solve their problems of having students learn a second language. However, there is little research into how teachers can scaffold the teaching/learning of Chinese by second language learners in English speaking countries. The research project reported in thesis explores different kinds of scaffolding to determine which might be useful for making Chinese learnable, by having students use their L1 (English) to learn the L2 (Chinese), the target language. In order to find the answers to the research questions, a self-study narrative inquiry was employed as the main research method. The data were collected from interviews, documents, reflection journal and questionnaires. Through the analysis of this data set, it is argued that three types of scaffolding are useful for making Chinese learnable by L2 learners, namely, music-based scaffolding, sociolinguistic-activity-based scaffolding and pattern-based scaffolding. This thesis presents a range of evidence about these three modes of scaffolding. Music-based scaffolding was used to with Kindergarten to Year 3 students to promote their Chinese language learning. Second, sociolinguistic-activity-based scaffolding made it possible for students in Year 4 to Year 6 to practise Chinese as an everyday sociolinguistic activity and develop their own self-scaffolding for learning Chinese. Third, like other forms of scaffolding, pattern-based scaffolding was used to reduce Year 4 to Year 6 students’ cognitive load when learning the complexities of Chinese, which included a shift from teacher scaffolding to students’ own scaffolding. This thesis provides several evidence-driven models for other teachers of Chinese to draw upon to make Chinese learnable for English speaking students.

Key words: Scaffolding, Music, Sociolinguistic Activities, Pattern, Self-scaffolding
Chapter 1: Scaffolding Chinese Teaching and Learning

1.1 Introduction

This research focuses on how to use scaffolding, for making Chinese learnable for beginning language learners, in this instance, primary school students in Australia. In order to realise this purpose, I have chosen to marry self-study and narrative methods of research in order to explore literature in this field and to generate an evidence-driven account of my findings. This thesis analyses the evidence from my teaching experiences in Australian primary schools. This includes the theory of pedagogical-content knowledge and language learning gained through my studies as a teacher-researcher in Australia. In this thesis, I study the three types of scaffolding to investigate their use for making Chinese learnable for English-speaking primary school students in Australia. The data source for this study includes my reflection journal, interviews with classroom teachers and a tuck-shop attendant, feedback and questionnaires from students. Analysis of this evidence enables me to create my own approach to scaffolding the teaching and learning of Chinese. A better understanding of the characteristics of the English-speaking students wanting to learn Chinese is necessary to stimulate their interest and desire to do so. Thus, this thesis focuses on ways to make Chinese learnable for these children, through teacher scaffolding and students’ self-scaffolding.

1.2 Project description

My research project had four aims:

1. To provide certain outcomes of value to other teacher-researchers, in particular:
   a. To provide useful and necessary insight into scaffoldings in the teaching and learning of Chinese
b. To explore the prospects for moving from teacher scaffolding into students’ self-scaffolding
c. To explore scaffoldings to make Chinese learnable

2. To contribute to the development of evidence-driven knowledge relating to the teaching and learning Chinese in Australia.

3. To contribute efforts to improve the efficiency of Australian language programs as a basis for improved language policy.

4. To stimulate students’ desire to continue learning Chinese in the future

1.3 Research questions

The propositions that the thesis explores are based on primary evidence relating to the following research questions. The contributory research questions are as follows:

1. How can Kindergarten to Year 3 students’ knowledge of music be used to scaffold their learning of Chinese? (Chapter 4)

2. How can scaffolding be used to take advantage of students’ recurrent everyday sociolinguistic activities in English to make Chinese learnable? (Chapter 5)

3. Why can visual patterns in Chinese be used to scaffold students’ learning of Chinese? (Chapter 6)

Together these contributory research questions enable me to address the main research question of this study. That concerns theoretic-pedagogical knowledge, and asks: What kinds of scaffolding might be used in teaching for L1 to L2 transfer in order to make Chinese learnable for English speaking school students? (Chapter 7)
1.4 The interrelationship between questions and research processes

As noted above, this thesis aims to answer the main research question by exploring through contributory research questions. The data sources to address the first contributory research question include my reflection journal and lesson plan, interviews with classroom teachers and student questionnaires. For the second question, the data sources cover a similar territory, namely, my reflection journal, teaching/learning materials, interviews with a tuck-shop attendant and classroom teachers, the feedback and questionnaires from my students. The third question also uses data from my reflection journal, teaching/learning materials, interviews with classroom teachers, feedback and questionnaires from students. The data generated in relation to each of these contributory research questions is analysed using open coding, axial coding, selective coding, content analysis and concept mapping (Creswell, 2007; Robson, 2002; Flick, 2009; Boeije, 2010). Table 1.1 summarises the interrelationship between these research questions and reveals the research processes of sourcing, collecting and analysing the primary evidence.

Table 1.1: The interrelationship between research questions and processes

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources</th>
<th>Data collection</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How can Kindergarten to Year 3 students’ knowledge of music be used to scaffold their learning of Chinese?</td>
<td>Primary data sources: 1) reflection journal 2) interviews 3) a lesson plan 4) questionnaires Secondary data sources: research literature</td>
<td>scholars myself as teacher-researcher classroom teachers students</td>
<td>1) Data selection 2) Opening coding 3) Concept mapping 4) Content analysis</td>
</tr>
<tr>
<td>2. How can scaffolding be used to take advantage of students’</td>
<td>Primary data sources: 1) reflection journal 2) interviews 3) written feedback 4) teaching/learning</td>
<td>scholars myself as teacher-researcher students classroom</td>
<td>1) Data selection 2) Opening coding 3) Axial coding</td>
</tr>
</tbody>
</table>
### 1.5 Research background

My interest in English began with the story of *The Three Little Pigs* when I was a Year 2 student in primary school. At that time, other Chinese primary school students began to learn English at Year 5. However, my classroom teacher who taught English and music to higher grade students decided to have us perform this story in English for a school activity; my peers played in Chinese. Fortunately, I was selected as one of the little pigs. My classroom teacher gave me the English dialogue and encouraged me to practise at home. I recited the whole dialogue fluently. When I performed my role in the play in English, the feeling was so great. I received high praise from my teacher. I was realised that English was such a wonderful language and became keen to learn more. I began to learn English by myself by listening to the English children’s songs in Year 2. This provided a good foundation for learning English.

When it came to Year 5, the time for us to learn English formally, another English teacher was in charge of my class. Her method of teaching was so boring: it was merely
duck-stuffing (填鸭式教育: tián yā shì jiào yù). She asked us to repeat again and again and to copy English vocabularies ten times. For this teacher, English could not be learnt without such boring practices. However, my English learning suffered greatly from such practice. The teacher’s negative attitude towards English finally had an adverse impact on my interest in learning English. Ironically, English became the subject I hated most.

Studying English in middle school was a turning point in my language education. Due to my poor English level, I was not as confident as I used to be. I even felt self-abased sometimes. I wanted to get praise and confirmation from the English teacher but always failed to do so because I had the wrong learning style. In Year 8, a new English teacher, Mrs Lu, came into my life. She gave me a warm feeling the first time I saw her. “Who wants to be my English monitor?” she asked with a nice smile. How I wished I could be the monitor, a high honour for most students. “If I could be the English monitor, I would do my best to be an excellent student of English,” I said to myself. But when I saw other excellent students put their hands up, I assumed it was impossible for the teacher to select me. So I bent my head sadly although I was so eager to raise my hand. “Zhou Lan, could you be my English monitor?” To my surprise, Mrs Lu chose me as her assistant! I could not help myself nodding and made up my mind to become an all-round excellent student.

In order to prove that Mrs Lu made a wise decision, I studied harder than others and made exacting demands of myself. I began to communicate with Mrs Lu about the ways of learning English and she gave the useful advice that responded to my characteristics. She encouraged me to read aloud in the front of the whole class to improve my oral English; Mrs Lu advised me to collect all my mistakes in a notebook, analyse them and develop strategies to overcome them. My learning became more efficient without being boring. She gave me the authority to do the class management and encouraged me to pose the question for my classmates instead of her. Her scaffolding impacted on my language learning. My confidence and English level grew quickly with her help and
encouragement. I became an excellent student and received praise and confirmation from all my teachers. It was the position and honour of being the English monitor that changed me.

Before the graduation, I asked Mrs Lu a question hidden in my heart for two years, “Why did you choose me?” She replied, “When I saw you bend your head, I knew that you wanted to be the English monitor. I believed you.” Believe in your students, understand your students, and cultivate your students---these were the initial beliefs about how to be a good teacher that were planted in my heart. Mrs Lu’s affective scaffolding impacted on me.

When I studied in high school, I met Mrs Wu, the most excellent English teacher in my school. Her students always were the best students in English. She never gave us burdensome learning chores. What she did was to stimulate our interest in English and then we would learn by ourselves. We competed with each other for answering her questions by raising our hands. This was a rare situation in high school classrooms because most Chinese students I knew were used to listening to teachers quietly. But this was normal in Mrs Wu’s English classes. We liked to compete with each other in English so that we could finish our task quickly and save time for other interesting activities. We sang the English songs with Mrs Wu while other classes were doing repetition in boring ways. We watched the latest Oscar winning movies with Mrs Wu and wrote about our feelings in English to share with others. Time in high school is very valuable, especially in class. However, Mrs Wu was willing to invert the time to offer us various ways of understanding English and western culture. She made English a part of our everyday life. We learned it for interest and communication rather than merely for the examination marks. With guidance from Mrs Wu, I made sense of her teaching methods and beliefs.

Having been influenced by Mrs Lu and Mrs Wu, I chose Teaching Chinese as Foreign Language as my major in university. With a good foundation of Chinese and English, I
won scholarships and praise such as the 2012 Zhejiang Province Excellent Undergraduate. This is one of the highest honours for a university undergraduate in Zhejiang Province (China). Then at the end of 2011, I was selected as one of the Volunteer Teacher-Researchers for an international Chinese language education project. This project was built with support of Ningbo Municipal Education Bureau (NMEB), the Centre for Education Research, University of Western Sydney and the NSW Department of Education and Communities (DEC), Western Sydney. Every year, the Ningbo Municipal Education Bureau (NMEB) selects up to 10 students as volunteers who go to Australia to teach Chinese while completing a Master of Education (Honours), a research degree. Fortunately, I won the chance to participate in this valuable project and to travel to Australia.

As a graduate with a major of Teaching Chinese as a Foreign Language, I was very confident that I could teach Chinese to English speaking Australian school students. This was not only because of my solid theoretical foundation in Chinese language teaching, but my rich experience in teaching Chinese to adults from overseas as well as teaching English to Chinese primary school students in China. I took it for granted that it would be very easy to teach Australian primary school students Chinese, including pinyin, vocabulary and grammar. My previous teaching experiences in China led me to think I would be equally successful in Australia. However, as my awareness of Australian primary school teaching began to accumulate after arriving here in the middle of 2012, I gradually felt disappointed. I did not have as much as confidence as I had before coming to Australia. A key reason was that my prior knowledge made me confused when confronted by a different educational culture. My knowledge, skills, experiences, expectations and beliefs about teaching and learning were not going to work in Australia.

I assumed that school students learning Chinese in Australia would be the same as the overseas adults I taught in China. I thought I would start with pinyin as a useful tool for teaching Chinese. When I learnt more about the situation in Australia primary schools, I
realized it would be impossible to teach pinyin systemically. My process for teaching Chinese in Australia would have to change to be more appropriate for the students and their everyday lives. But how should I plan my teaching methods to enhance the learnability of Chinese for my students? The primary students I was to teach were beginners. The time allocated for learning Chinese by the school was only about 30 to 45 minutes per week, or even two weeks for some classes. How could I make Chinese learnable by stimulating the students’ interest in this language? The first thing I had to do was to change my belief—the professional stance regarding the teaching of Chinese. In China, the overseas adults and the Chinese primary school students I had taught had a specific aim for learning the target language. This was true for most of them but not all those who were motivated chose to study hard and willingly practised after class by doing their homework and reciting some necessary content. Compared with my former students in China, most of my Australian primary school students had no specific reasons for learning Chinese. In China, English is a global language (Jiao & Cui, 2008). As a student, I learned under a teacher-centred education system and I did very well. I believed that the best way to learn a language was to listen to the teacher’s presentation of the content and to consolidate it after class.

Now in Australia, I was asked to design many activities for students in a limited time. How was I going to propose these teaching and learning activities to enhance students’ learning of Chinese? Before I went to school to observe the classroom, I doubted the teaching theories I had studied in China and that constituted my prior knowledge of language education. As I observed the class, I learnt to analyse the characteristics of the Australian students. After I received initial training in language training from the DEC, I began to realise that I should change my prior knowledge and learn more about scaffolding to make Chinese learnable for my Australian students.

What I needed to analyse now is how to use scaffolding to make Chinese learnable. Deng Xiaoping said, “No matter whether the cat is white or black, it is a good cat if it
can catch the mouse” (不管黑猫白猫，能抓老鼠就是好猫: bù guǒn hēi māo bái māo, néng zhuō lǎo shǔ jiù shì hǎo māo). Therefore I should learn or develop useful and appropriate scaffolding to develop my ability for teaching Chinese in the limited time in Australia.

1.6 Research methods

During the initial phase of this research, I asked the students to provide feedback about their experience of learning Chinese and do questionnaires. This evidence was gathered as part of my normal teaching and this also provided data for my research according to the requisite ethical protocols. In this project, evidence I collected included reflection journal, interviews with classroom teachers and a tuck-shop attendant, interviews, questionnaires and feedback from students, lesson plans and teaching/learning materials. The interviews were conducted with the classroom teachers from these three schools (Yuan Yang Public School; Xin Hang Gardens Public School; Li Yuan Public School) and one tuck-shop attendant at Xin Hang public primary school. The interviews focused on my class teaching, my students’ characteristics and their learning of Chinese. Each interview took approximately twenty to thirty minutes. Documents I collected included students’ feedback and questionnaires, the lesson plans and teaching/learning materials I produced. Together these form the data set for this study. My reflection journal included notes I made during my observations in schools, as well as and reflections on my own teaching, my knowledge of the students’ local sociolinguistic practices, as well as whether they were learning Chinese as a result of my lessons. This journal also included my personal ideas about my lessons and other details related to this research. The length and the frequency of my writing in this reflection journal were flexible, but I did this after my lessons every day. I also prepared questionnaires written in English, with questions for my students to answer. In terms of data analysis, I employed coding, as well as content analysis and concept mapping.
My research was designed around the constraints and opportunities presented by the selected sites and the participants, as well as data collection methods and data analysis techniques. This study was conducted in Yuan Yang Public School and Xin Hang Gardens Public School and Li Yuan Public School; all pseudonyms for public schools in Western Sydney which were chosen because these were the three schools where I taught Chinese as a volunteer teacher-researcher. There were 149 student participants, 15 teacher participants and one tuck-shop attendant in this study. The gender distribution between male and female was approximately equal. Some students had multi-cultural and second language backgrounds; none were of Chinese background. I elaborate on the research methodology in chapter 3.

1.7 Significance of this research

This section briefly considers why it is important for second language (L2) learners in Australia to learn Chinese. Throughout human history, languages have played an important role in the transmission of intellectual culture and knowledge, promoting “the formation of global-local power structures, and functioned as shibboleths for determining friend from foe” (Ding & Saunders, 2006, p. 3). Today globalisation influences the local diversity of students and the increase in the range of languages used. Currently, English serves a globally hegemonic role in promoting the economy and the exchange of information across time and space (Block & Cameron, 2001; Ding & Saunders, 2006).

It is of great importance for the rising generation of English speaking school children in Australia to develop a personal relationship with Chinese people. Dale (2005) argues that the knowledge economy is having an increasingly significant impact due to changing global and regional socioeconomic contexts. Australia has been developing an advantage from the revitalisation of the Chinese economy. However, it is important for there to be mutual socio-economic benefits. This is possible through Australians learning the Chinese language. Orton (2008) argues that there is an urgent need for the
“development in the breadth and quality of Chinese teaching and learning in Australian schools as a matter of national strategic priority” (p. 8). However, there is a problem with 94% of English speaking learners giving up Chinese once it is no longer mandated; those who continue to learn the language are most Chinese-Australians. This means a study of scaffolding is worthy of further research, especially as much of the research literature focuses on scaffolding English language learning (Pol, Volman & Beishuizen, 2010; Shapiro, 2008; Boblett, 2012).

The continuing public debate in Australia about language education (Orton, 2008) reveals, at least to some extent, the economic, cultural and intellectual need there is for the cultivation of bilingual skills among young monolingual, Anglophone Australians. In order to promote effective interactions with the increasingly stronger economic power of Asia, and to enhance China/Australia collaboration and knowledge exchange, educational research is warranted in Australia to address the issue of how “the majority of the population, monolingual English speakers [can acquire] new language knowledge [that is] among English-only speakers through formal education” (Bianco & Slaughter, 2009, p. 5). So this study relates to concerns about “how to efficiently stimulate usable second language proficiency in school and university beginner programs” (Bianco & Slaughter, 2009, p. 5). Orton (2008) suggests that further educational research is necessary to develop public debate, teacher education, teaching resources and innovative practices for Chinese teaching/learning as well as exploring the gaps in current understanding.

In the global competition, “soft architecture” influences each country’s economic, cultural and diplomatic power. Bilingual communicative capabilities are now a factor determining which country and which people have a role as global players (Ding & Saunders, 2006; Henderson, 2008). The Chinese language is an important part of the soft architecture of China. Knowledge of Chinese is expected to increase Chinese global cultural power through “an improved national image, strong international cultural exchanges, greater inbound and outbound tourism and the worldwide
distribution of cultural products” (Ding & Saunders, 2006, p. 26). In the current era of globalisation, the second decade of the twenty first century, China is facing internal and external obstacles to achieving the potential influence of its cultural power resources globally. Making Chinese learnable by foreigners in foreign countries such as Australia is integral to addressing this problem.

The power of language cannot be ignored. Teaching Chinese serves an important role in building a stronger relationship between Australian and China. This applies in terms of international policy, but more importantly with respect to the everyday economy and culture of Australian people. The learning of the Chinese language is expected to increase China’s cultural attractiveness and “achieve the necessary momentum to compete with the crushing pervasiveness of American (and European) soft power” (Ding & Saunders, 2006, p. 23).

Australia and China to some extent share the common desire to promote their ability for global competition. They also want to promote the teaching/learning of Chinese for their own interests that seem to overlap (Orton, 2008). The study reported here proved worthwhile, because it found out about the everyday sociolinguistic practices and characteristics of Australian primary school students. I used knowledge for making it possible for them to learn Chinese.

1.8 Thesis statement

This study about scaffolding is useful for teaching English speaking primary school students Chinese despite their limited time. First, scaffolding caters to the characteristics of Australian primary school students. Their interest in music and movement made it possible to use music-based scaffolding for learning Chinese. Their recurring everyday sociolinguistic activity of going to the tuck-shop to buy food provided the opportunity to make the tuck-shop a practical place for them to practise Chinese on a recurring basis. Chinese also provides the opportunity for pattern-based
scaffolding as an efficient tool to teach Chinese. Importantly, I shifted from teacher-driven scaffolding to student-driven self-scaffolding. This made students into active and efficient learners and built their confidence. This drove their desire to learn Chinese because they could see that Chinese is learnable. This actually identified some teaching models of scaffoldings for making Chinese learnable for English speaking learners.

1.9 Outline of thesis structure

Chapter 2 reviews the literature about the problems of Chinese teaching and learning, teachers’ knowledge, the characteristics of beginning language learners, Zone of Proximal Development (ZPD), scaffolding, and making advantages of scaffolding for language learning. Gaps were found in the current literature, in particular that there were few strategies for scaffolding the learning of Chinese and how to transfer from teacher scaffolding to students’ self-scaffolding.

Chapter 3 explains and justifies the research methods used in this study. The data collection and data analysis procedure actually used in this research are described. Self-study and narrative inquiry are the research strategies I used. I employed interview(s), document collection, reflection journal and questionnaire(s) as the methods to collect data. Coding, content analysis and concept mapping were used to analyse the data.

Chapter 4 begins by explaining why music is suitable for scaffolding for teaching/learning Chinese. Second, the reason for why behaviour engagement is used as assist performance is provided. Third, a complete lesson is analysed to show the whole process of using music-based scaffolding for teaching/learning Chinese. Evidence drawn from different perspectives shows the usefulness of scaffolding.
Chapter 5 analyses the evidence of how to use sociolinguistic-activity-based scaffolding for making Chinese learnable. The focus starts on the selection of teaching content. The main focus is on scaffolding students to make preparation for sociolinguistic activity (like buying food at the tuck-shop in Chinese) and scaffolding students to practise Chinese in sociolinguistic activities. The transfer of students’ self-scaffolding from teachers’ scaffolding was found in this chapter.

Chapter 6 provides analysis of evidence about the use of visual patterns in Chinese to scaffold students’ Chinese learning. Here the pedagogical focus is on pattern-based scaffolding. The characteristics of Chinese allow for pattern-based scaffolding. Through feedback from the students, this chapter also shows students’ self-scaffolding.

Chapter 7 presents the conclusion made in this thesis with regard to the use of scaffolding to make Chinese learnable. The main findings for each research question are presented here. Besides providing the key findings of this study, the pedagogical implications of the scaffolding are explained. Given the limitations of this study, this chapter makes suggestions for further studies.
Chapter 2: Literature Review

2.1 Introduction

This chapter reviews the research literature reporting on the difficulties of making Chinese learnable, the characteristics of English speaking language learners, teachers’ prior knowledge and the possibility of scaffolding being used to address these problems. In other words, this literature review is organised into four major sections relating to this study’s research questions. First, the literature on the problems of Chinese teaching and learning is reviewed. Second, research about teachers’ knowledge, to analyse the role this plays in teaching and teachers’ professional development is reviewed. The third section reviews literature on the characteristics of language learners in English speaking countries. The fourth section explores literature discussing the use of scaffolding, including the concept of Zone of Proximal Development (ZPD). This literature review has helped to gain a better understanding of what others have done in the field where this study is situated. It has helped to further clarify the research questions which are explored in this study.

2.2 The problems of making Chinese learnable

This section focuses on the challenges of making Chinese learnable for English speaking students in English speaking countries. It contains three parts relating to these problems, namely teaching/learning materials, Chinese language challenges, and language teachers.
2.2.1 Teaching/learning materials

In the process of learning Chinese, teaching/learning materials might be better when related to everyday sociolinguistic activities of the learners and the expected outcomes of their learning (Pennyool, 2010). According to Zhang and Li (2010), beginning language learners in the UK are made to feel that Chinese is difficult, if not impossible to learn. This is partly because “most of the available teaching materials were designed from the point view of the Chinese language itself rather than the needs of the learners and users” (Zhang & Li, 2010, p. 93). In other words, rather than the language learners’ recurring interests, as expressed in sociolinguistic activities, it is the special and difficult features of the Chinese language that are identified by Chinese linguists and teachers of Chinese as the focus for teaching. These work against the learners’ desire to learn the language. In addition, they found that there is little content in the available teaching/learning materials that guide the learner how to use the language in school communities where the Chinese language is not spoken; consideration is given to language learners’ local sociolinguistic practices as a basis for making Chinese learnable. The lack of teaching/learning materials that makes an explicit connection between the language learners’ knowledge of their first language (English) makes them feel that Chinese is remote and difficult to learn. Research is needed to provide new directions into making Chinese learnable, in particular there is a need to focus on the language learners’ everyday sociolinguistic practices in English.

2.2.2 Chinese language challenges

A challenge for teachers of Chinese is to make language learnable for English speaking school students. Orton’s (2008) research focuses on challenges Australian students have in learning Chinese: tones, homophones, characters and the system of particles and verbs. However, it is not clear why teaching beginning language learners needs to start with these challenges. For beginners, there is a need to give them a sense of success in learning the language by using their recurring everyday interests to teach the language,
so as to incite their desire to continue learning the more challenging aspects of the language. However, Orton (2008) says the lack of a global sense of tones makes learning Chinese a challenge for English speaking Australian students, who have no idea about how to make the right sound (tone). They become reluctant or resistant to open their mouth. So it must be asked, why start with tones, or at least why use an approach to teaching tones which alienates students. The combination of Chinese syllables and tone variation means that there are some 1200 different sounds in Chinese. Of course, it is difficult for beginning language learners to learn and remember such a large number of Chinese syllables. But is that how teaching Chinese should proceed? No one expects a baby born in China to know all these sounds in a matter of no time at all. Chinese characters can be taught in ways that emphasise their complexity in terms of strokes, pronunciation and meaning. But it is not clear that this is helpful for beginning language learners. That these three elements are usually learned interdependently merely increases the difficulties teachers create for beginning language learners. However, Zhang and Li (2010) argue that course design, content selection and delivery methods should be based on students’ need rather than the linguistic features of Chinese. This study investigates the possibility of using students’ everyday sociolinguistic activities as the driver for course design, content selection and pedagogy.

2.2.3 Language teachers

These are problems with regards to Chinese language teachers which also lead to difficulties in making Chinese learnable. Orton (2008) found that many L1 teachers (Chinese speakers) employed by schools have difficulties in teaching Chinese in Australian schools. L2 teachers of Chinese criticise L1 teachers for “their inability to assist L2 learners with tone, and insistence on native like assurance” (Orton, 2008, p. 22). These teachers’ lack of communication strategies and modes of intercultural expression does not help cultivate bilingual Australians. Experienced and skilled teachers can make an advantage of the materials (despite their limitations) by creating
teaching strategies are suitable for, and which benefit local learners (Orton, 2008; Zhang & Li, 2010). However, there is a shortage of appropriately educated teachers of Chinese. The ROSETE Partnership aims to redress this problem.

2.3 Teachers’ knowledge

This section focuses on two issues. The first part introduces teachers’ prior knowledge. The second focuses on teachers’ theoretic-pedagogical knowledge.

2.3.1 Teachers’ prior knowledge

Research shows that prior knowledge is a filter for students’ learning. This applies to teachers as well as students (Cummins, 2008). In teacher-education, much attention is given to “altering how pedagogical instruction is learned and enacted by teachers” (Watzke, 2007, p. 64). Watzke (2007) argues that this is because teachers’ prior knowledge is embodied as a result of their own learning experiences as school students and the modelling provided by previous teachers. This means, before undertaking a four year course at university, student-teachers have already had twelve years of education in being a teacher as a result of their own schooling. As beginning teachers, they draw on their prior knowledge in order to reflect on their students’ language learning and their own teaching. To shift this, changes in teachers’ pedagogies are necessary.

The content of teachers’ prior knowledge is very broad. As Ell, Hill and Grudnoff (2012, p. 56) point out that “prior knowledge might contain facts, experiences, expectations and preconceptions, and be held as knowledge, skills or beliefs about teaching and learning”. Watzke (2007, p. 63) generated four categories of teachers’ prior knowledge: “frames for instructional decisions, attitudes toward teacher control in the classroom”, “instructional goals for daily lessons”, and “considerations for responding to student affect were identified to explain overarching change in foreign language pedagogical content knowledge”. According to Symeonidou and Phtiaka (2008, p. 545), it is this
prior knowledge that informs beginning teachers’ conceptualizations of education, schooling, teaching, learning, students and teachers. Prior knowledge can be a useful resource for the teaching/learning of beginning teachers; it can also be a problem. This knowledge impacts the capability of beginning teachers to find key points in students’ everyday sociolinguistic practices as a basis for teaching the target language.

Teachers’ prior knowledge is influenced by various factors. Arıoğlu (2007, p. 172) points out that “prospective teachers do not enter teacher education as blank slates; they arrive with prior knowledge and beliefs about their subject areas”. Arıoğlu (2007) argues that there are three key sources of influence on teachers’ prior knowledge, namely, their prior language learning experiences, prior teaching experiences, and professional coursework in pre- and in-service education. It is this prior knowledge which shapes (but does not decisively determine) teachers’ capabilities to engage in —and produce —new ways of engaging students in learning the target language and improving their own teaching beyond what they learnt during their schooling. Thus, teachers’ prior knowledge impacts on their ever-evolving theoretic-pedagogical knowledge, sometimes positively, sometimes negatively.

Teachers’ prior knowledge is not always helpful to teachers’ professional learning. Watzke (2007) points out that their prior knowledge may be an obstacle for beginning teachers. If their prior knowledge is not informed by, and re-negotiated in relation to their specific teaching situation, it is likely to obstruct students’ learning. In such circumstances, beginning teachers’ prior knowledge may be misleading, especially when used inflexibly. Moreover, if teachers’ instructional decisions cannot adapt to the changes necessitated by changed circumstances, which inevitably occurs over time, they may experience dissonance caused by conflicts between their inherited beliefs to which they remain wedded and the changed realities of schooling.
2.3.2 Teachers’ theoretic-pedagogical knowledge

Teachers’ theoretic-pedagogical knowledge has drawn increasing attention from scholars. Such teacher knowledge is important as it involves “firsthand experience of students’ learning styles, interests, needs, strengths and difficulties, and a repertoire of instructional techniques and classroom management skills” (Elbaz cited in Arıoğlu, 2007, p. 170). There are, however, in what constitutes teachers’ theoretic-pedagogical knowledge, various contested definitions of “practical knowledge”. Fenstermacher (cited in Chou, 2008, p. 530) defines it as “the knowledge that teachers themselves generate as a result of their experiences as teachers and their reflections on these experiences”. It is this theoretic-pedagogical knowledge that helps teachers engage in informed educational actions, given their prior knowledge and insights into their changing circumstances. Zanting, Verloop and Vermunt (cited in Chou, 2008, p. 529) define teachers’ theoretic-pedagogical knowledge as “an amalgam of all teachers’ cognitions, such as declarative and procedural knowledge, beliefs, and values, which influences their pre-active, interactive, and post-active teaching activities”. According to Chou (2008), this knowledge is based on teachers’ reflections and prior knowledge or experience which they use to guide teaching/learning practice. At the same time, it includes knowledge of the subject being taught and their knowledge of past efforts at teaching it. Just as non-Westerners are denied a role as theorists (Patel, 2010), it seems that the “practical knowledge” serves to do likewise with regard to teachers.

In this study, teachers’ theoretic-pedagogical knowledge is seen as being related to their prior knowledge. Chou (2008) argues that teachers re-construct their prior knowledge, experience, beliefs and their future-oriented intentions for coping with the problems of the present situation. Chou (2003) argues that there are four categories of theoretic-pedagogical knowledge: knowledge of self, knowledge of subject matter, knowledge of instruction and knowledge of context. Borg (2003) points out that this knowledge is an important part of the general framework of teacher cognition. He defines the practical knowledge as including teachers’ general knowledge, beliefs and
thinking. In this study, teachers’ theoretic-pedagogical knowledge appears to have an important role in shaping – and reshaping – teachers’ work of teaching and learning. This is what has emerged in this study.

2.4 The characteristics of beginning language learners

In this section, the aim was to find research about the sociolinguistic characteristics of language learners that is relevant to the students with whom the teacher-researcher was working. Thus, this section reviews three key issues from the literature, specifically the characteristics of young children learning a language; students’ prior knowledge and children’s sense of language similarities.

2.4.1 Characteristics of young children learning a language

The understanding of student characteristics is necessary to help teacher-researchers improve students’ learning and thus become better teacher-researchers. According to Harmer (2001) it is important to know the learning characteristics of the children we teach. The characteristics Harmer (2001) identified are listed in Table 2.1, but need not be regarded as the characteristics of all students.

Table 2.1: The characteristics of young children learning a language

<table>
<thead>
<tr>
<th>Content</th>
<th>Young children’s characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual word</td>
<td>Response to the meaning even if they do not understand individual words</td>
</tr>
<tr>
<td>Learning way</td>
<td>Indirectly rather than directly; take in information from all sides rather than topics they are being taught</td>
</tr>
<tr>
<td>Understanding</td>
<td>From what they see, hear, touch and interact with, rather than just from explanation</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>Display a curiosity about the world around them</td>
</tr>
<tr>
<td>Sense of achievement</td>
<td>Need for individual attention and approval from the teacher</td>
</tr>
<tr>
<td>Talking and learning content</td>
<td>Are keen to talk about themselves and learn about themselves and their own lives quickly as main topics in the classroom</td>
</tr>
<tr>
<td>Attention</td>
<td>Have a limited attention span; easy to get bored and lose</td>
</tr>
</tbody>
</table>

21
In terms of making Chinese learnable, understanding students’ orientation to learning is necessary to inform the work of the teacher-researcher. Liddicoat (2005) argues that a characteristic of students’ recognition to the target language (e.g. Chinese) is that they are influenced by the teachers’ explanation of the functions related to the particular language. This could lead teachers to establish an explanatory framework for helping beginning language learners better understand the functions of the target language. Even so, Liddicoat (2005) argues the teachers’ explanation of language functions should not be too deep or detailed.

However, Ringbom and Jarvis (2009) argue that, at the early learning stage, language learners characteristically attend to, and focus on linguistic form, rather than meaning and function. The former is less abstract and more accessible to the learners’ own direct observation and analysis. This suggests that in making Chinese learnable, teacher-researchers might improve their students learning by focusing on the apparent similarities they perceive between English, the students’ first language. Using students’ perceptions of similarities in linguistic forms, teacher-researchers then work with them to develop an entry-level sense of its linguistic function. This argument between Liddicoat (2005) and Ringbom & Jarvis (2009) provides an important focus for this research.

Student language learners are influenced by several factors. In particular, Cummins (2008, pp. 67-69) argues that students use their prior understandings, integrate factual knowledge into their conceptual frameworks and employ meta-cognitive strategies to actively control their learning. For teacher-researchers, this means they might usefully engage language learners’ prior understandings of their first language (in this study it is English), integrate what they know from their first language, developing knowledge of the target language (Chinese in this instance), and encourage their use of meta-cognitive strategies.
strategies to learn Chinese, by closing their ideas to visualise characters or closely saying the words to themselves. Cummins (2008) argues for teaching for transfer from L1 to L2, which is using students’ knowledge about and from their L1 (English) to learn the L2 (Chinese). In teaching for L1/L2 transfer, there are five types of transfer which can provide the pedagogical focus for teaching: 1. “transfer of phonological awareness”; 2. “transfer of specific linguistic elements”; 3. “transfer of pragmatic aspects of language use”; 4. “transfer of conceptual elements”; and 5. “transfer of meta-cognitive and meta-linguistic strategies” (Cummins, 2008, pp. 67-69). This provides the theoretic-pedagogical framework which was investigated through this intervention.

2.4.2 Students’ prior sociolinguistic knowledge

Students’ prior sociolinguistic knowledge is potentially powerful resource for their language learning. Cummins (2008, p. 67) argues that students’ prior sociolinguistic knowledge not only includes the previously acquired linguistic information or skills but also the experiences that have shaped and no doubt reshaped their “identity and cognitive functioning”. This prior knowledge (e.g. English) has a considerable influence on what students perceive about the target language (e.g. Chinese) they are learning, its content and the environment it can be used in. This prior sociolinguistic knowledge (of English) impacts on the sociolinguistic observations and interpretations they make of the target language (Chinese). From kindergarten on, Australian students tend to bring their knowledge of the English they know to class to communicate with peers and teachers. Language teachers can, for instance, incorporate “these words into technology-supported bilingual or multilingual dictionaries” (Cummins, 2008, p. 73). Angelis (2011), Liddicoat (2005) and Ringbom and Jarvis (2009) argue that students’ prior sociolinguistic knowledge plays an important role in their learning a new language. Second language learners engage in their knowledge of their first language (that is their prior sociolinguistic knowledge) by using “perceived similarities” (Ringbom & Jarvis, 2009) that for them seem to exist between it (English) and the target language (Chinese). What students notice about the target language, and therefore benefit from making this
the focus of their teaching/learning, is based on their prior sociolinguistic knowledge of English, which is mostly acquired through experiential learning. Ell, Hill and Grudnoff (2012) argue that students’ prior sociolinguistic knowledge is both a resource and a challenge for teachers. On the one hand, this prior sociolinguistic knowledge may be useful in students’ learning, or, it may be an obstacle. The teacher-researchers take this knowledge, to find ways for it to be used to develop students’ language learning from the learners’ perspective.

2.4.3 Language similarities for beginning language learners

Language similarities are important for teaching beginning language learners, especially children. Jarvis (2000), Odlin (2003) and Pavlenko (2003) point out that teachers who recognise the language similarities which children see, can make a pedagogical advantage of their perception of similarities between their first language and the target language, for instance between English and Chinese. Children’s perceived similarities between L1 (English) and L2 (Chinese) have to be mobilised by teachers to play an important role in pedagogies of language transfer (Cummins, 2008).

Language learners’ perception of similarities between English and Chinese would seem to be potentially significant for making Chinese learnable. According to Ringbom and Jarvis (2009, p. 106) these “similarities have a much more direct effect on language learning and performance than differences do”. Learners tend to look for the similarities between the target language and their prior sociolinguistic knowledge: “They make use of intra-lingual similarities, which are perceived from what they have already learnt of the target language” (Ringbom & Jarvis, 2009, p. 106). As foreshadowed in the discussion above, there are two types of similarities, namely actual similarities and assumed similarities. Actual similarities “belong to the domain of linguistics and can accordingly be analysed linguistically,” while assumed similarities “relate to the process taking place in the learners’ mind” (Ringbom & Jarvis, 2009, p. 107).
As noted above, it is the assumed similarities made by language learners that “have a greater and more direct effect on language learning and performance than actual similarities do” (Ringbom & Jarvis, 2009, p.107). Of course, assumed similarities change with increases in the students’ knowledge and proficiency in the target language. In particular, at the early learning stage, beginning second language learners benefit from teachers using their perceptions of cross-linguistic similarities to build interlingual relations and identifications into their long-term memory (Ringbom & Jarvis, 2009).

### 2.4.4 Student engagement

Engagement is important in the process of second language learning. Axelson and Flick (2010, p. 38) define “student engagement” as “how involved or interested students appear to be in their learning and how connected they are to their classes, their institutions, and each other”.

Engagement has three forms. Mitchell and Carbone (2011, p. 259) point out that the three types are “behavioural (engagement)”, “cognitive (engagement)” and “affective (engagement)”. Table 2.2 provides the detailed explanation for each engagement.

#### Table 2.2: Three types of engagement

<table>
<thead>
<tr>
<th>Engagement</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Behavioural engagement</strong></td>
<td>refers to participation in academic, social and extracurricular activities</td>
</tr>
<tr>
<td><strong>Cognitive engagement</strong></td>
<td>concerns involvement in learning, motivation to learn, willingness to exert effort to learn difficult concepts and skills, the use of strategies</td>
</tr>
<tr>
<td><strong>Affective engagement</strong></td>
<td>encompasses emotional aspects, feelings, attitudes, and perceptions towards the educational environment, relationships with teachers and classmates</td>
</tr>
</tbody>
</table>

(Source: Mitchell & Carbone, 2011, p. 259)
The importance of engagement should not be ignored. Appleton, Christenson and Furlong (2008, p. 372) argue that engagement has a close relationship with “self-regulation, relevance of school work to future endeavours, value of learning, personal goals and autonomy”. Munns and Woodward (2006, p. 195) point out that student engagement is at the heart among “classroom pedagogies, student learning experiences and high performance learning”. Student engagement in their Chinese language class influences their learning efficiency and learning outcomes.

2.5 Zone of Proximal Development (ZPD)

2.5.1 Defining ZPD

There is much research about the Zone of Proximal Development (ZPD). Palincsar (cited in Boblett, 2012, p. 3) describes it as “one of the most used and the least understood constructs to appear in contemporary educational literature. Vygotsky defines ZPD as follows:

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Cited in Compernolle & Williams, 2012, p. 42).

Wang (2011) defines ZPD as “the term used to refer to the layer of skill or knowledge which is just beyond that with which the learner is currently capable of coping” (p. 47). This definition suggests that teachers of Chinese need to be good at finding out the language learners’ ZPD and use it to promote appropriate methods.
2.5.2 The function of ZPD

The power of ZPD should not be ignored. Ramey (2010) argues ZPD “bridges the gap between what is known and what is possible to know and it is in this gap that learning occurs” (p. 77). Compernolle and Williams (2012) point out that ZPD is meant “to lead to deeper, more conceptually based understandings of language” (p. 54). Lantolf (cited in Compernolle & Williams, 2012, p. 42) argues that ZPD is “conceived of as the collaborative construction of opportunities … for individuals to develop their mental abilities”.
2.6 Scaffolding

The term “scaffolding” is a metaphor that has been largely discussed within a Vygotsky’s socio-cultural framework. It is usually associated with Vygotsky’s notion of the Zone of Proximal Development (ZPD). Wood, Bruner and Ross (cited in Boblett, 2012, p. 3) wrote:

The intervention of a tutor may involve … a kind of “scaffolding” process that enables child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts.

Wells (cited in Shabani, Khatib & Ebadi, 2010, p. 241) defines scaffolding as “a way of operationalizing Vygotsky’s concept of working in the zone of proximal development”. Stone (cited in Pol, Volman & Beishuizen, 2010, pp. 271-272) concludes the concept of scaffolding has been so broad it “has led to the use of scaffolding as a teacher initiated, directive instructional strategy”. Geert and Steenbeek (2005) define scaffolding as referring to a dynamic process of “how a particular level of knowledge or skill in a student changes” (p. 117). Scaffolding can be complicated. According to Scarino and Liddicoat (2009, p. 53), scaffolding involves:

1. explaining a new concept through a concept map
2. making deliberate comparisons with the first language and culture
3. focusing on particular words to develop a metalanguage
4. providing and explicating fruitful examples; asking students to notice particular aspects/features
5. highlighting patterns, choices
6. elaborating on an initial explanation
7. using questions to probe students’ conceptions and prompt them to describe their interpretations and challenge their opinions
8. using various ways of representing ideas and concepts (eg visuals, diagrams, organisers, highlighting, various media and technologies)
9. feedback that relates to improvement.

2.6.1 Characteristics of scaffolding

What constitutes the important features of scaffolding is subject to much debate,
varying from scholar to scholar. For example, extension means that “the expert extended the situations and function of utterances, thus introducing more contexts which were appropriate for particular utterances” while ratcheting means “expert kept to familiar lexicon, syntax, and contexts, providing a steady foothold for the child as he prepared for the next step forward” (Bruner, cited in Boblett, 2012, p. 6). However, elsewhere the characteristics for scaffolding have been defined as “intersubjectivity, graduated assistance and transfer of responsibility” (Stone, cited in Boblett, 2012, p. 10).

Then, against this, in Table 2.3, Van Lier (cited in Nguyen, 2013, p. 65) claims that there are six key features of scaffolding, namely: (1) continuity; (2) contextual support; (3) intersubjectivity; (4) contingency; (5) handover/takeover; and (6) flow. In Pol, Volman and Beishuizen’s (2010, pp. 274-276) review of scholars’ arguments over models of scaffolding, there are three characteristics of scaffolding: “contingency”, “fading” and “the transfer of responsibility”. All these features are elaborated upon in Table 2.4.

Table 2.3: Characteristics of scaffolding

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuity</td>
<td>Repeated occurrences over time, with variations connected to one another</td>
</tr>
<tr>
<td>Contextual support</td>
<td>A safe but challenging environment, errors are expected and accepted as part of the learning process</td>
</tr>
<tr>
<td>Intersubjectivity</td>
<td>Mutual engagement and support, two minds thinking as one</td>
</tr>
<tr>
<td>Contingency</td>
<td>The scaffolding support depends on learners’ reactions, elements can be added, changed, deleted, repeated, etc.</td>
</tr>
<tr>
<td>Handover/Takeover</td>
<td>There is an increasing role for the learner when skills and confidence increase</td>
</tr>
<tr>
<td>Flow</td>
<td>Communication between participants is not forced, but flows in a natural way</td>
</tr>
</tbody>
</table>

(Summarised from Nguyen, 2013, p. 65)
Table 2.4: Explanation of main three characterises of scaffolding

<table>
<thead>
<tr>
<th>Key words</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingency</td>
<td>Responsiveness, tailored, adjusted, differentiated, titrated or calibrated support.</td>
</tr>
<tr>
<td>Fading</td>
<td>The gradual withdrawal of the scaffolding. The rate of fading depends on the child’s level of development and competence</td>
</tr>
<tr>
<td>The transfer of</td>
<td>Responsibility can refer to students’ cognitive or meta-cognitive activities or to students’ affect. Via contingent fading, responsibility for performance of a task is gradually transferred to the learner.</td>
</tr>
<tr>
<td>responsibility</td>
<td></td>
</tr>
</tbody>
</table>

(Summarised from Pol, Volman & Beishuizen, 2010, p. 274)

Figure 2.3 is a conceptual model of scaffolding, showing the whole process. It starts with the support provided by teaching and the responses made, based on feedback, indicating a contingency in students’ learning. With the help of diagnostic and scaffoldings strategies, the teachers’ support for students’ learning this language unit can be gradually faded out. At the same time, students shoulder more responsibility for demonstrating their learning of this particular language unit. This is called the transfer of responsibility.
2.6.2 Functions of scaffolding

Recognising the complication of defining, it does have various functions. For instance, Maggioli (2012, p. 42) points out the functions of scaffolding as the following, namely: (1). recruitment; (2) reduction of degrees of freedom; (3) direction maintenance; (4).marking critical features; (5) frustration control; (6) demonstration or modelling. However, Pol, Volman and Beishuizen (2010, p. 276) argue that scaffolding has five functions, namely: (1)direction maintenance; (2) cognitive structuring; (3) reduction of the degrees of freedom; (4) recruitment; (5) contingency management or frustration control. Table 2.5 compares the functions and the intentions of scaffolding.
<table>
<thead>
<tr>
<th>Wood’s six functions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recruitment</td>
<td>Engaging the learner</td>
</tr>
<tr>
<td>2. Reduction of degrees of freedom</td>
<td>Developing the task around manageable components (but not simplifying it)</td>
</tr>
<tr>
<td>3. Direction maintenance</td>
<td>Ensuring the learner is on task</td>
</tr>
<tr>
<td>4. Marking critical features</td>
<td>Highlighting the crucial aspects of a task</td>
</tr>
<tr>
<td>5. Frustration control</td>
<td>Reducing the frustration level of a task</td>
</tr>
<tr>
<td>6. Demonstration or modelling</td>
<td>Providing possible ways of reaching a solution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pol.et.al ’s five intentions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direction maintenance</td>
<td>Keeping the learning on target and maintaining the learner’s pursuit of a particular objective. This intention is of a largely meta-cognitive nature.</td>
</tr>
<tr>
<td>2. Cognitive structuring</td>
<td>The teacher provides explanatory and belief structures that organise and justify</td>
</tr>
<tr>
<td>3. Reduction of the degrees of freedom</td>
<td>Entails taking over those parts of a task that the student is not yet able to perform and therefore simplification of the task for the student.</td>
</tr>
<tr>
<td>4. Recruitment</td>
<td>Getting students interested in a task and helping them adhere to the requirements of the task</td>
</tr>
<tr>
<td>5. Contingency management or frustration control</td>
<td>Concerns the facilitation of student performance via a system of rewards and punishments as well as keeping students motivated via the prevention or minimisation of frustration</td>
</tr>
</tbody>
</table>

(Summarised from Maggiolo, 2012; Pol, Volman & Beishuizen, 2010)

A comparison of these scholars’ different views on scaffolding indicates that there are several points of argument between their suggested functions and intentions. Moreover, the functions and intentions of scaffolding are interrelated.

Table 2.6 illustrates the framework of scaffolding. It consists of two parts: scaffolding intentions and means. The scaffolding intentions are described from three perspectives. Support of students’ meta-cognitive activities refers to direction (e.g. keeping students’ interest in learning Chinese). Support of students’ cognitive activities refers to cognitive structuring (e.g. providing students with the visual language structure of Chinese) and reduction of degrees of freedom (e.g. the learnable units of Chinese). Support of student affect refers to recruitment (e.g. explaining the Chinese points through different
perspectives to maintain students’ interest) and contingency management/frustration control (e.g. using positive feedback to build students’ confidence in learning Chinese). The means of scaffolding covers feeding back, hints, instructing, explaining, modelling and questioning.

**Table 2.6: Framework for analysis of scaffolding strategies**

<table>
<thead>
<tr>
<th>Scaffolding intentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support of students’ metacognitive activities</td>
</tr>
<tr>
<td>A. Direction maintenance</td>
</tr>
<tr>
<td>D. Recruitment</td>
</tr>
</tbody>
</table>

(Source: Pol, Volman & Beishuizen, 2010, p. 278)

**2.6.3 Types of scaffolding**

Some common types of scaffolding are described here. According to Maggiolo (2012, pp. 42-43), there are six types of scaffolding, namely, modelling, bridging, contextualizing, schema building, representing and meta-cognitive development.

Pentimonti and Justice (2009) distinguish between the low support scaffolding strategies and high support scaffolding strategies. Table 2.7 clarifies these scaffolding strategies. Low support scaffolding strategies means minimal levels of adult assistance are provided to children’s areas of learning through generalising, reasoning and
predicting. High support scaffolding strategies refers more to structured adult assistance provided to children whose skill requires a great deal of support to complete a learning task. Scaffolding includes co-participating, reducing choices and eliciting.

Table 2.7: Clarification of low support strategies and high support strategies

<table>
<thead>
<tr>
<th>Key words</th>
<th>Types</th>
<th>Description</th>
<th>Examples in learning Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low support strategies</td>
<td>Generalizing</td>
<td>Prompts children to extend the lesson content beyond the lesson itself to past or future personal experiences</td>
<td>With combining your shopping experience in Australia and these pictures of shopping in China, who can tell me the shopping culture differences between Australia and China?</td>
</tr>
<tr>
<td></td>
<td>Reasoning</td>
<td>Prompts children to explain why something happened or will happen, or to explain why something is the way it is</td>
<td>Chinese flag is red, the majority decoration of Chinese New Year is also red, can you guess why red is so important to Chinese people?</td>
</tr>
<tr>
<td></td>
<td>Predicting</td>
<td>Prompts children to describe what might happen next or to hypothesize the outcome of an event/activity</td>
<td>What do you think the next word will be with this pattern?</td>
</tr>
<tr>
<td>High support strategies</td>
<td>Co-participating</td>
<td>Prompts children to produce a correct answer to a task through their completion of the task with another person, teacher or a peer</td>
<td>Picking a student who learns as the model, encourage other students to say with him or her in Chinese</td>
</tr>
<tr>
<td></td>
<td>Reducing choices</td>
<td>Prompts children to complete a task by reducing the number of choices of correct answers</td>
<td>When you see a teacher in school in the morning, what can you say? “你好”(Hello) or “再见”(see you)?</td>
</tr>
<tr>
<td></td>
<td>Electing</td>
<td>Prompts children to produce a correct answer to a task by providing an exact model of the ideal response</td>
<td>What does this word say? This word says“好样的”(well done). Now, see the shape of mouth and listen to me</td>
</tr>
</tbody>
</table>
Other useful scaffolding strategies include self-scaffolding, collective scaffolding, peer scaffolding, mediation and appropriation.

Self-scaffolding by students enables teachers to develop their knowledge by using their scaffolding strategies. Thus, students’ self-scaffolding refers to the ways in which learners’ own visualisation and/or auditory expression of the target language is used by skilful teachers to direct and support their learning (Mascolo, 2005, p. 193). Bickhard (2005, p. 170) argues that “idealizations recognized as forms of student self-scaffolding”. The students’ self-scaffolding is an important part in teachers’ work in language education.

Collective scaffolding is a strategy focused on a group of learners. Boblett (2012) suggests using collective scaffolding to pair peers to successfully engage in scaffolding those learners of lesser or equal proficiency. Factors that influence collective scaffolding include the level of expertise of the learners, the nature of the language learning task, the goals of the learners, and their developmental level (Boblett, 2012).

Mediation is a strategy for connecting learners’ knowledge of their sociolinguistic and cultural environment to their language learning. According to Boblett (2012), mediation scaffolding refers to a connection made to the target language through reference to learners’ local interactions with other individuals in their local environment. Mediation scaffolding provides a basis for forming a community that communicates in the target language. As members of a school community, learners come to understand the meaning and value of the target language in reference to their life experiences and everyday material existence.
Supportive scaffolding is vital for motivating students’ emotions. For Boblett (2012, p. 8), supportive scaffolding “contributes to learners’ motivation and confidence as well as to the development of abilities and knowledge”. It is important for learners’ cognitive and affective development.

Boblett (2012) identifies five characteristics of instructional scaffolding, namely: (1) ownership; (2) appropriateness; (3) structure; (4) collaboration and (5) internalization. Table 2.8 describes each characteristic in detail.

**Table 2.8: Five characteristics of instructional scaffolding**

<table>
<thead>
<tr>
<th>Five characteristics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Ownership</td>
<td>Giving the learner a voice and a sense of purposefulness in relation to the task</td>
</tr>
<tr>
<td>(2) Appropriateness</td>
<td>Through building tasks based on the learners’ current knowledge, while at the same time providing guidance aimed at stretching that knowledge</td>
</tr>
<tr>
<td>(3) Structure</td>
<td>By presenting tasks in a context of supportive dialogue that provides a natural sequence of thought and language, as well as by suggesting effective routines for learners to internalize</td>
</tr>
<tr>
<td>(4) Collaboration</td>
<td>Via building on and recasting student efforts through telling, modelling, questioning, rephrasing, extending, praising, and correcting</td>
</tr>
<tr>
<td>(5) Internalization</td>
<td>Gradually moving control of the interaction from teacher to student, after which the scaffolding self-destructed</td>
</tr>
</tbody>
</table>

(Summarised from Boblett, 2012, p. 8)

Role-play is regarded as an effective teaching strategy. Heyns (2007, p. 87) defines role-play as “the students are expected to adopt specific roles in the different sessions, reflect on the application and their performance”. It is important to develop students’ conscious sensitivity towards the underlying meanings. Role-play can help students become familiar with and absorb new knowledge in practising through action.

Simulation is also a useful strategy for preparing students to apply what they have learned in the real world. Richards and Szilas (2012, p. 1) define simulation as “a
representation of reality”. Simulation is an important scaffolding strategy because Richards and Szilas (2012, p. 2) argue it “allows the trial and error learning process to be sped up because the actors are playing or pretending and thus the risks and consequences of failure are much lower”. This suggests simulation could be vital to enhance students’ confidence in practising Chinese in their “real world” everyday lives. Table 2.9 provides three types of simulation.

### Table 2.9: Three types of simulation

<table>
<thead>
<tr>
<th>Type</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive simulation</td>
<td>The learner observes the operation of a simulation as it unfolds</td>
</tr>
<tr>
<td>Exploration simulation</td>
<td>An unfamiliar environment where a learner selects from multiple paths to navigate through</td>
</tr>
<tr>
<td>Task-based simulations</td>
<td>The learner interacts with objects or characters in realistic situations to achieve a specific goal</td>
</tr>
</tbody>
</table>

(Summarised from Richards & Szilas, 2012, p. 1)

To some extent, scaffolding is a flexible strategy and not fixed or prescriptive. According to Pol, Volman and Beishuizen (2010), the number of scaffolding strategies are “too great to summarize fully here [because] any combination of a scaffolding means with scaffolding intention can be construed as a scaffolding strategy” (p. 277). In other words, if a scaffolding strategy is appropriate to support different educational intentions and usefully responds to students’ learning needs (p. 277), it can be used.

### 2.6.4 Assisted performance

Assisted performance is another important concept related to ZPD. Assisted performance provides a framework for teaching activities that help guide the student through their ZPD towards self-regulated learning (Rowe, 2012, p. 2). For Fani and Ghaemi (2011, p. 1551) “assistance in the ZPD may be called scaffolding, and the accomplishments made with assistance may be termed assisted performance”. Assisted performance is important because “both ZPD and scaffolding concepts emphasize that
the ability to perform a task develops through assisted performance” (Nguyen, 2013, p. 66). However, there is a difference between scaffolding and assisted performance, such that “the nature of that scaffolding must have the goal of cognitive development; otherwise it remains as assisted performance” (Johnson, 2009, p. 22).

To some extent, the means of assisted performance are similar to scaffolding strategies. Modelling, contingency management, feeding back, instructing, questioning and cognitive structuring are the main means of providing assisted performance. Johnson (2009, p. 23) argues that “scaffolding within the ZPD can only lead to the development of what is already ripening [whereas] through assisted performance you can get almost anyone through any kind of task if you give the right kind of assistance, including direct assistance”.

2.7 Making advantages of scaffolding for language learning

This, the final section in this literature review, addresses the issue of making advantages of scaffolding to make Chinese learnable for beginning language learners. It refers to the influence of the role of the teacher-researcher in education, reflective practice, imagination, critical thinking and observation.

The teacher-researcher in education plays an important role in helping beginning teachers to develop their theoretic-pedagogical knowledge for using scaffolding. The ROSETE Partnership provides beginning teacher-researchers with training in educational research and ways of making Chinese learnable, as well as issues about quality teaching in NSW public schools. According to Ginns and others (2001), teacher education programs provide beginning teachers with support and advice to help them adjust to teaching more quickly. Through my involvement in the ROSETE Partnership, I learnt about the issues covered in the this literature review and the research methods explored in the chapter. I also learnt about quality teaching. All of this theoretic-pedagogical knowledge came together and was extended through my work in
local schools, as I now have a better understanding of Australian primary students’ characteristics as learners. This teacher-researcher education program is quite distinctive, in so far as there is a real “link between coursework, field experiences, and the ability of pre-service teachers to use professional terms and theoretical models to analyse and discuss student learning” (Watzke, 2007, p. 66).

Reflective practice is necessary for beginning teacher-researchers. To reflect on my own beliefs and experiences with respect to students’ learning serves to effectively enhance my capabilities as a teacher-researcher (Watzke, 2007). Grossman, Valencia, Thompson, Martin, Place and Evans (2001) contend that reflective practice influences teachers’ professional learning, especially during their beginning years of teaching. It helps beginning teachers to improve their theoretic-pedagogical knowledge and thus their professional growth. According to McGregor and Cartwright (2011), reflective practice includes three interacting elements, namely experience of teaching, evidence driven-reflection and learning based on the analysis of primary evidence. These affect each other through a circulatory movement.

Imagination is necessary for the teacher-researcher to effect the transition between the vague “background of inquiry and the cognitive foreground of ideas” (Pacifici & Garrison, 2004, p. 125). My imagination was informed by my personal and professional needs, desires, and interests. Exercising imagination in relation to making Chinese learnable was crucial for me as a teacher-researcher to create teachable/learnable moments. Fontaine (2010, p. 58) argues that the imagination can “set us free to pursue our self-appointed ends”. It enabled me as a teacher-researcher to be emancipated from the limitations of my inherited thoughts; that is, at least some of my prior knowledge. Contexts, interconnections and continuities enabled me as a teacher-researcher to develop the imagination I need to enable my students to carry out their quest to learn Chinese, knowing full well that it was a goal that could be achieved in the time available. Imagination has a close relationship with experience. According to Fleer (2011, p. 35), there is “a mutual dependence between imagination and experience”.
They influence each other. With the help of imagination, it may be less difficult for me to construct appropriate pedagogies and take action to improve students’ learning.

*Critical thinking* refers to “trying to understand a subject, thinking about it, appreciating it, understanding the strengths and limitations of it and then developing a point of view on the subject” (Moon, 2007, p. 22). However, Hinkel (2011, p. 389) argues that “a critical perspective examines institutional structures involved in education and argues for change and improvement from a clearly articulated ideological stance”. “一针见血” (yī zhēn jiàn xuě: pierce [get] to the truth with a single pertinent remark) is an old Chinese saying that describes how to use critical thinking. A critique is a scholarly way for teacher-researchers to promote their discipline that may help them to apply their theoretic-pedagogical knowledge. It may help teacher-researchers assess what may be right or wrong. At the same time, a critical perspective is useful for analysing evidence for points of support and contradictions. By this means, it is possible to find the contrary points of views of making Chinese learnable. To some extent, knowledge of counter-evidence and counter-arguments is necessary to make possible justifiable conclusions that have reliability, validity and durability (Moon, 2007).

### 2.8 Gaps in present knowledge and understanding

The gaps in the literature reviewed above can be summarised as follows. In terms of the problems of teaching Chinese, the literature focuses on the generalities rather than the specifics of making Chinese learnable for English speaking students learning the language. In my research, I worked to find out more specific details about Australian children’s learning of Chinese. With the regard to teachers’ prior knowledge, the literature provides a general definition of this concept and its importance. It also mentions that teachers’ prior knowledge can have a positive or negative influence on students’ learning. However, it does not explain what kind of prior knowledge beginning teacher-researchers might find beneficial for making Chinese learnable in a country such as Australia. Consequently, in this study, I explored the relationship
between beginning teacher-researchers’ prior knowledge gained in China and their new knowledge as a basis gained in Australia, to provide suggestions for the professional learning of other teacher-researchers in this field.

With respect to the characteristics of children, the literature illustrated the general characteristics of young children learning a second language, the influence of their prior knowledge and the role of assumed cross-linguistic similarities in their language learning. However, the literature does not explain the sociolinguistic characteristics of Australian students or what this means for relating their English to their assumptions about its similarities with Chinese. It also does not demonstrate whether or how these characteristics might be used by teacher-researchers’ scaffolding students’ language learning. Third, the literature reviewed in this chapter does not point out how teacher-researchers can recognise the sociolinguistic characteristics of students or how they might develop a better understanding of what this means for teaching for L1/L2 transfer. In my research, I observed the recurring everyday sociolinguistic practices of my students and analysed this primary evidence on the basis of the theoretical concepts canvassed above. Then, I interviewed the local teachers and other ROSETE members to enrich my knowledge base.

When it comes to ZPD, the literature introduces its definition, debates and importance. However, it does not tell us what strategies Chinese teacher-researchers might use to take advantage of students’ current knowledge and skill for learning Chinese. The literature about scaffolding explores its definition, characteristics, functions and types. However, it does not mention that what kind of scaffolding might useful and appropriate for Australian students to learn Chinese. It also does not point out what kind of strategies might be recommended to teachers, to address the issue of how to transfer from teachers’ scaffolding to student-driven self-scaffolding. The literature draws an outline of scaffolding but does not provide teachers of Chinese with specific steps to follow or to draw upon. From the perspective of assisted performance, the situation is similar to scaffolding, with the literature just providing the definition and the main
means rather than specific advices or steps.

In terms of making an advantage of scaffolding to stimulate language learning, the literature has explained how some factors influence the development of teachers’ scaffolding. However, it does not reflect how these factors impact on beginning teacher-researchers’ teaching of Chinese or what it means for students’ learning of Chinese. The theories are too broad to give useful suggestions for teacher-researchers to take immediate advantage of them. In this thesis, I analysed these theories in the light of primary evidence from my Chinese language lessons to draw out revisions to these ideas.

2.9 Conclusion

Chapter 2 has provided a picture the problems of making Chinese learnable for beginning language learners in a largely English speaking country. It explores the kind of knowledge that teachers of Chinese need in order to resolve this problem, including knowledge of the characteristics of beginning language learners. A key focus of this chapter is on the strategies associated with the concepts of the characteristics of beginning language learners, Zone of Proximal Development (ZPD) and scaffolding. Thus, this chapter not only shows the outcomes of previous research done by other scholars, but also provides insights into the research gaps in this field.

The next chapter explains and justifies the theoretical basis of the research methods. It explains how the triangulation of data collection provides for validity and reliability in this study. The data analysis procedure enables the development of a vivid picture about how to use scaffolding to help English speaking students learn Chinese.
Chapter 3: Teacher-researcher Methodology and Methods

3.1 Introduction

In this study, the teacher-research is the main research methodology. There are five sections to this chapter which together explain and justify my approach to teacher-research methodology and methods. First, I give an account of the dilemmas I experienced in choosing a teacher-research methodology. Second, I outline the research principles and procedures that guide this study. Third, I provide an overview of this study’s research design. The fourth and fifth sections provide an account of the data collection methods and the data analysis techniques I employed. The final section provides an account of the research-writing process I used. Together, the sharpening of these tools helped me conduct a rigorous research project and to ensure that the key findings I report in the thesis are as credible as they are significant.

3.2 Theoretical basis for the teacher-research process

The purpose of this research was to investigate what kinds of scaffolding are useful for making Chinese learnable for monolingual, English speaking primary school students in Australia. This research responds to the challenge that there is a 94% drop-out of such students learning Chinese in Australia by the end of senior secondary school (Orton, 2008). Given this massive drop-out rate, principals, parents, teachers and students are concerned that current pedagogies are the most appropriate for making Chinese learnable. Scaffolding is important for reducing the cognitive burden in any form of learning. This study investigates the potential of scaffolding for making Chinese learnable for monolingual, English speaking students in a predominantly English speaking country. This chapter details the teacher-researcher process employed in this study, including the data collection and analysis procedures. Teacher-research is a
strategic process for integrating teaching and research, theory and practice, action and knowing in ways that are directly related to improving students’ learning.

3.2.1 Teacher-research as self-study

It must be emphasised that this self-study is not, as the name might imply, about me or only about me. Bullough and Pinnergar (2001) assert “self-study is about you in relation to your practice and others who share your practice setting” (Samaras, 2011, p. 13). Self-study teacher-research makes an original contribution to knowledge in an internationally important scholarly conversation about making Chinese learnable for monolingual, English speaking students in a predominantly English speaking country. I decided to use self-study teacher-research because it is meant to provide conceptually informed, empirically grounded explanations and understandings that enable the formation of theoretic-pedagogical frameworks that improve students’ learning. I elected to use self-study teacher-research as a way of finding out about making improvements in teachers’ knowledge and action so as to improve students’ learning of Chinese. Thus, self-study teacher-researcher is a methodology that contributes to the professional knowledge and action:

A personal, systematic inquiry situated within one's own teaching context that requires critical and collaborative and collaborative reflection in order to generate knowledge as well as information the broader educational field. (Sell, cited in Samaras, 2011, p. 10)

Self-study teacher-research has important educational advantages. Pinnegar and Hamilton (2008, p. 3) argue that self-study allows teacher-researchers to “more fully bring their scholarship into their teaching by providing a robust methodology for studying teaching and teacher education practice”. First, it provides teacher-researchers with a different way to judge their proficiency and to account for their capabilities through self-evaluation. To some extent, it enabled me as teacher-researcher to be responsible for my own professional learning and that of my students. However, I also greatly benefited from my teaching supervisors, school mentors and
University/Department language and research educators. Second, self-study research has the immediacy to enable teacher-researchers to assess their own teaching and their students’ learning by providing structured opportunities to reflect on primary evidence that can usefully inform their theoretic-pedagogical framework. Third, self-study research provides a basis for teacher-researchers to engage in teachers’ theorising by identifying and explaining teaching practices that can be drawn upon by other teacher-researchers.

I used my direct teaching experiences as the main focus for my self-study research, and as the source of primary evidence. My research questions for this project were generated and refined as a result of my experiences of teaching in Sydney over the course of 12 months. My work as a teacher-researcher played an important role in my professional learning. It also provided opportunities for me to check my theories through practice and reflection: “Examining the realities created by this gap leads to new understandings of personal theory making” (Samaras, 2011, p. 10). This self-study teacher-research project enlarged my professional understanding as it involved critical collaborative inquiry and appropriate feedback from significant others, especially my University/Department language and research educators. In this way, I gained a better understanding of what it means to make Chinese learnable for monolingual, English speaking students in a predominantly English speaking country, furthered my own professional development, as well as enhancing my students’ learning of Chinese.

3.2.2 Narrative teacher inquiry

I chose to use narrative teacher inquiry because it invited me to explore my own professionalism through the research process, and especially in reporting of this research. I hope that my narrative inquiry reveals to readers “a lively conscience and balanced sense of self-importance, tells a recognizable teacher or teacher educator story” (Robert, Bullough & Pinnegar, 2001, p. 19). Through the analysis of my own professional learning experiences, I was able to present a sense of the dynamic struggle
of working in a new and different educational culture and thereby developing new perspectives on how to work towards making Chinese learnable for monolingual, English speaking students in Australia.

As a popular portmanteau in contemporary teacher-research, “narrative” maybe defined as:

Stories, journaling of your ongoing record, essays, or other reflections about your study; can include education-related life history, interpretations of visual data, and story of your research process (Samaras, 2011, p. 283).

Narrative inquiry was a useful way for me as a teacher-researcher to express my ideas and capture my work-integrated learning experiences for others to draw upon. According to Bold (2012), narrative inquiry provides teacher-researchers with ways to explore their professional learning through a critically reflective approach to their practice. It involves practical and theoretical elements – that is knowledge and action - which helps teacher-researchers to “develop and justify their own conceptual understanding of narrative in relation to their own research” (Bold, 2012, p. 17). The advantages of narrative inquiry are claimed to be as follows:

1. It enables the researcher to identify and understand event narratives
2. It focuses on the narrators’ perspective
3. It focuses the research on how narratives are elicited (Bold, 2012, p. 127).

Through this study, however, I found the advantages of narrative teacher inquiry are as follows:

1. It enabled me to become a teacher-researcher, to identify event narratives to better understand the reason and improvement of my Chinese teaching
2. While focused on my perspective as narrator, it was not self-centred but enabled me to give primary focus to my students’ learning of Chinese.
3. It focused my research project on eliciting and constructing narratives which explored the use of scaffolding
As a teacher-researcher I designed my research project for a particular educational context, namely public schools in Sydney (Australia) and with particular students in mind, namely monolingual English speaking primary school students. I decided to use narrative inquiry to generate short stories to reveal what I learnt through a systematic approach to research. The stories are presented in the evidentiary chapters “in relation to depicting what happens on the knowledge and experience landscape” (Pinnegar & Hamilton, 2008, p. 70). Bullough and Pinnegar (2001, p. 14) argue that “experience is what we study, and we study it as narrative because narrative thinking is a key form of experience and a key way of writing and thinking about it”. The experience I have studied is that of making Chinese learnable for monolingual English speaking students. Story-telling or creating narratives provided me with a way of theorising through my writing about this experience. Thus, this narrative teacher inquiry reflects the special relationship between the people and place where I engaged in my professional learning through engaging knowledge and action. I have drawn conclusions about these educational experiences to share with other teacher-researchers in similar situations or working in similar circumstances.

3.3 Research Principles

This section explains the research principles and procedures I employed to guide this project, namely those relating to ethical considerations, credibility and trustworthiness, triangulation, and generalisability of this research.

3.3.1 Ethical considerations

Research ethics is a critical concern for all stages of teacher-research. As a teacher-researcher I took the participants’ role in my study into account, especially that of the children, and “think from their perspective about the expectation [I] want them to do in [my] research” (Flick, 2009, p. 43). In this self-study narrative research, ethics
can be “pragmatic, relational, and based on experience” (Pinnegar & Hamilton, 2008, p. 106). I knew the decisions I made and the strategies I used would have an impact on the participants, especially my students. It was, therefore, necessary for me to think carefully about ethics as these concern the pedagogical strategies, data collection methods and data analysis techniques I used. I have become increasingly aware of my ethical responsibility related to human dignity, and each individual’s psychological and physical well-being (Samaras, 2011).

The research reported in this thesis received ethics approval from the University’s Human Ethics Committee and the NSW Department of Education’s SERAP. The following list of documents confirms that I made every effort to ensure ethical considerations were addressed by me in this research:

1. Approval of University Ethics Committee (see Appendix 1)
2. State Education Research Approval Process (SERAP) Approval (see Appendix 2)
3. Participant Information Sheet (see Appendix 3 to Appendix 5)
4. Participant Consent Form (see Appendix 6 to Appendix 8)

This means that my entire research process, including the way of getting data and dealing with data, followed the approved ethical procedures and principles. All participants were given a written information sheet and asked to give written consent prior to doing interviews and questionnaires or writing feedback. In the case of students, I gave their parents or guardians an information and consent form so that their parents knew the purposes and benefits of this research in advance, and could approve – or not – their children’s involvement in this study. The classroom teachers collected the consent sheets from the students’ parents or care-givers. In the case of the classroom teachers and the tuck-shop attendant, they were given the information sheets and consent forms before they decided to participate in my study. All the names of the participants have been protected by making them and their schools anonymous by using pseudonyms. No one, except me, knows who the actual people are.
3.3.2 Credibility and trustworthiness

In order to provide reliable and valuable findings, I have taken the credibility and trustworthiness of the primary evidence into account. Credibility and trustworthiness are of great importance in teacher-research, because it is “concerned with whether the findings are ‘really’ about what they appear to be about” (Robson, 2002, p. 93). In this self-study and narrative inquiry research, I was researching my practices as much as students’ learning. Consequently, to enhance the integrity of this research I had to build a reasonable measure of trust in the evidence I collected or generated about both my teaching and the research process itself. Because of the question of credibility and trustworthiness in self-study and narrative inquiry research, I worked at being “careful, consistent and honest [in] accounting [for my] experiences” (Pinnegar & Hamilton, 2008, p. 161). The ways of data collection and analysis might enhance credibility and trustworthiness. The data collection covers various factors, namely, reflection journal, lesson plans, teaching/learning materials, interviews with classroom teachers and a tuck-shop attendant, questionnaires and written feedback from students. Then the similarities and differences would be found out during the process of analysis.

For the purpose of making sure of the credibility and trustworthiness of the primary evidence and the way it has been used in this study, I took several steps to achieve this goal. First, I managed to get a large group of participants (n=165) to volunteer to participate in this study. There were 149 students from three primary schools ranging in ages from 6 years old to 12 years old, as well 15 teachers and 1 tuck-shop attendant. This number of participants contributes to enhancing the trustworthiness of this study. Second, all the data, including the reflection journal, the transcriptions of interviews, paper interviews and e-mail interviews, students’ feedback and questionnaires have been well recorded and maintained. The consent forms from the participants are also stored in a safe place with my principal supervisor. This is necessary to make sure that all the evidence is real rather than a fabrication. Third, the methods for data collection and analysis are quite reliable as I invested considerable time undertaking both tasks,
and compared various analytical methods before determining the most useful and reliable procedures. My data analysis was checked by my principal supervisor, my analyses were workshopped by colleagues in the ROSETE team, and I asked for suggestions from experienced classroom teachers regarding my interpretations. Last but not least, I recognise that there are positive and negative aspects to my research, and I acknowledge these limitations in the conclusion to this thesis.

### 3.3.3 Triangulation

Triangulation is a valuable and generally used strategy to strengthen reliability and comprehensiveness of self-study teacher-research (Walliman, 2011). Miles and Huberman (cited in Robson, 2002, p. 293) argue that:

> Triangulation is a state of mind. If you self-consciously set out to collect and double-check findings, using multiple sources and modes of evidence, the verification process will largely be built into the data gathering process, and little more need be done than to support on one’s procedures.

In this study, the modes of triangulation used were methodological triangulation and participant triangulation. Table 3.1 shows the specific forms of triangulation used in each of the evidentiary chapters.

### Table 3.1: Triangulation methods used in each evidentiary chapter

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Data sources</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music-based scaffolding (Chapter 4)</td>
<td>- Reflection journal</td>
<td>Data selection</td>
</tr>
<tr>
<td></td>
<td>- Interviews with classroom teachers</td>
<td>Opening coding</td>
</tr>
<tr>
<td></td>
<td>- Questionnaires from students</td>
<td>Concept mapping</td>
</tr>
<tr>
<td></td>
<td>- A lesson plan</td>
<td>Content analysis</td>
</tr>
<tr>
<td>Sociolinguistic-activity-based scaffolding (Chapter 5)</td>
<td>- Reflection journal</td>
<td>Data selection</td>
</tr>
<tr>
<td></td>
<td>- Interviews with classroom teachers and tuck-shop attendant</td>
<td>Opening coding</td>
</tr>
<tr>
<td></td>
<td>- Students’ written feedback</td>
<td>Axial coding</td>
</tr>
<tr>
<td></td>
<td>- Students’ written feedback</td>
<td>Selective coding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Content analysis</td>
</tr>
</tbody>
</table>
I used various data collection methods such as interviews, documents and reflection-journal, lesson plans and teaching/learning materials as evidentiary sources for triangulation. My analysis of the data I collected was informed by theories of teaching Chinese as a foreign language I had studied in China, but more so by those I learnt in Australia. Triangulation helped me generate a more reliable data set and also enhanced my ability to compare the similarities and differences across data from the different participants, thereby providing a stronger basis for establishing the key findings.

3.3.4 Generalisability of this research

There are several insights from the research reported here that are likely to be generalisable to other similar situations for further research. Scaffolding in language teaching and learning is one of the important fields in teacher-research. This study reports on three approaches to scaffolding, namely music-based scaffolding, sociolinguistic-activity-based scaffolding and pattern-based scaffolding. Scaffolding is necessary for making Chinese learnable for monolingual English-speaking students, especially for their learning to speak and listen to Chinese. Many young students like music and videos. These can provide useful teaching/learning resources for scaffolding the learnability of Chinese, which is meant to reduce the cognitive burden of any form of learning. A key element of any form of scaffolding is that students can transfer it to produce their own methods of self-scaffolding. This is an important meta-cognitive
process which must be explicitly discussed with students. The use of students’ recurring everyday sociolinguistic activities performed in English can be used by teachers to scaffold their learning to Chinese in order to enhance their confidence and sense of achievement in learning Chinese. Pattern-based scaffolding takes advantage of what English-speaking students see as the key features of Chinese characters (Han zi) and uses the students’ perceptions of these as stepping stones to build their knowledge. This makes Chinese learnable by substantially reducing the burden of learning, and makes teaching more successful and rewarding. By teaching Chinese characters (Han zi) through pattern-based scaffolding, it is possible for students to learn different topics using the same key words. For example, students learn Chinese numbers in one lesson; they can then gradually learn how to say week, date, money and time, and then they can learn translate these over several lessons. Thus, scaffolding is beneficial for students’ learning of Chinese as it reduces the burden of learning and so promotes their learning more effectively.

There are, however, some limitations to the generalisability of these approaches to scaffolding the learnability of Chinese. One is that these specific approaches to scaffolding are unlikely to be appropriate for reading and writing Chinese. There are further challenges for a teacher-researcher to address in order to scaffold the reading and writing of Chinese. Second, teacher-researchers need to find more effective methods for selecting the teaching/learning content to scaffold, in particular this might be even more effective if the students are actively involved in the selection of English language music they know. Third, scaffolding requires forms of teaching/learning that have students repeat many times and in numerous ways the Chinese they are learning. Teaching them Chinese that they can make a part of their everyday sociolinguistic activities is essential for getting this much needed repetitive practice.

3.4 Research Design

This section on research design provides an account of the research sites and the
participants, including the criteria for the selection and process of recruitment of the specific participants.

3.4.1 Site selection

This study focuses on Yuan Yang Public School, Xin Hang Public School and Li Yuan Public School. Yuan Yang Public School is an exciting and dynamic school focusing on innovative teaching/learning programs and practices. It offers Chinese and Chinese cultural lessons through the Ningbo Volunteer Program operating in partnership with the Ningbo Municipal Government, and the NSW Department of Education and Communities, and the University of Western Sydney. The school has formed a sister school relationship with the First Central Primary School in Huangpu District, Shanghai (China).

Xin Hang Public School and Li Yuan Public School were also selected because they are involved in promoting the Chinese language in Western Sydney. They provide caring, stimulating environments for their students and offer a range of programs to develop students’ talents and interests, such as Chinese lessons. Together they provide strong support for the teaching and learning of Chinese.

3.4.2 Participants

There were three groups of participants involved in this research project. Students were Group 1 (n=149), classroom teachers were Group 2 (n=15) while the tuck-shop attendant was Group 3 (n=1). The total number of participants in this project across all sites was 165. The participants in Group 1 come from Yuan Yang Public School, Xin Hang Public School and Li Yuan Public School. They were all my students, aged 6-12 years old and all were learning Chinese. The number of participants in this group was 149; all were recruited with their parents or care-givers’ approval. Students in Year 1 to Year 3 completed a short questionnaire (see Appendix 9), while those in Year 4 to Year
6 completed a questionnaire (see Appendix 10 to Appendix 11) and provided written feedback about Chinese learning. The questionnaire was in English, and was reasonably easy for primary school students to answer. The questions all related to their Chinese learning and my scaffolding. To find out about their own self-scaffolding, I asked for written feedback.

Participants in Group 2 were 15 local classroom teachers from the three schools. They ranged in age from 28 to 60 years old. They were invited to observe my Chinese lessons to provide oral feedback, to complete an observation form and were interviewed. The Group 3 was a tuck-shop attendant at Xin Hang Public School. I interviewed this attendant who had a child in one of my classes.

3.5 Data collection

In this section, I explain the data collection methods used in this project. My methods of data collection included interviews, document collection, reflection journal and questionnaires.

3.5.1 Interview

Interviews have been proved to be a powerful tool for collecting data for this study. In part this was because they provided me with a flexible data collection method. I used semi-structured interviews (see Appendix 12) which are widely used in educational research to carry out studies such as this, which was constrained by limited resources and time (less than twelve months of fieldwork) (Robson, 2002). The order of questions in semi-structured interviews was modified according to what I judged as most appropriate during the course of the actual interviews. Likewise the actual interview questions were “changed and explanations given [in the course of the interview]; particular questions which [seemed] inappropriate with a particular interviewee [were] omitted, or additional questions included” (Robson, 2002, p. 270).
The open questions I used in the interviews encouraged the interviewees to express their opinions freely (Flick, 2009). Overall I found semi-structured interviews to be an appropriate method for this research.

There were three types of interview conducted for this study, namely face-to-face interview, paper interview as well as e-mail interview. The differences among these three types of interview relate, firstly to the difference in form. The face-to-face interviews were like a purposeful conversation. The paper interview involved giving the classroom teachers pieces of paper with my teaching process and form of evaluation on it (see Appendix 13). I used these written accounts to express clearly my specific teaching steps, which gave the classroom teachers a focus for recalling and providing appropriate feedback. The content of e-mails was the same as paper interview.

A second point of difference between these interviews related to the flexible time for collecting data. Compared with the face-to-face interview, it was more flexible for classroom teachers to fill in the form without talking with me. Likewise, the e-mail interview helped me get more data without taking-up the teachers’ lesson time. Australian classroom teachers are very busy in the school; there was limited time for them to make an appointment with me. To some extent, paper interviews and e-mail interviews could solve this problem.

The third difference concerned the interaction between classroom teachers and myself as a teacher-researcher. In terms of the face-to-face interviews, I was able to discuss with classroom teachers some points they raised during the interviews. However, there was no such interaction between classroom teachers and myself in paper interviews and e-mail interviews. Even so, the answers they provided were focused, and suggested that the classroom teachers thought seriously about them as they wrote their replies. Paper interview and e-mail interview may be regarded as providing for “an open-ended, discovery-oriented method and the goal of the interview is to deeply
explore the respondent’s point of view, feeling and perspectives” (Zami & Lee, 2009, p. 27).

Table 3.2 is the summary of the use of interviews in each evidence chapter. It clearly illustrates the specific interview ways and their usage.

**Table 3.2: The use of interview in each evidentiary chapter**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Research key words</th>
<th>The use of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Music-based scaffolding</td>
<td>1) Evidence for why music may be an appropriate scaffold to teach Kindergarten to Year 3 students (face-to-face interview with classroom teachers).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Evidence for why behaviour engagement may be a good assisted performance for music-based scaffolding (face-to-face interview with classroom teachers).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Evidence for classroom teachers’ evaluation for music-based scaffolding (paper interview and e-mail interview with classroom teachers).</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Sociolinguistic-activity-based scaffolding</td>
<td>1) Evidence for the scaffolding from the tuck-shop attendant to help my students practise Chinese (face-to-face interview with tuck-shop attendant).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Evidence for the tuck-shop attendant’s evaluation of my sociolinguistic-activity-based scaffolding (face-to-face interview with tuck-shop attendant).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Evidence for the classroom teacher’s evaluation of my sociolinguistic-activity-based scaffolding (face-to-face interview with a classroom teacher).</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Pattern-based scaffolding</td>
<td>Evidence for classroom teachers’ evaluation of my pattern-based scaffolding (paper interview and e-mail interview with classroom teachers).</td>
</tr>
</tbody>
</table>
3.5.2 Document collection

Interviews enabled me to collect valuable data for this study. However, due to the inherent and even desirable lack of standardization, which is seen by some as possibly causing problems of reliability, I supplemented this with other data collection methods (Robson, 2002). Consequently, I used additional data collection methods, such as document collection to enhance the reliability of the data set. According to Robson (2002), documents can include books, newspapers, notices, as well as non-written documents such as pictures, drawings and photographs. In this study I paid particular attention to collecting and analysing documents as a basis for my multi-method research. Specifically, in this research I collected my students’ feedback and the teaching/learning materials I created, as well as those I used. My teaching materials included PowerPoint, and integration for students’ work (for example, Figure 5.2 in Chapter 5). It shows a vivid picture of how I used them as part of scaffolding.

In this project, Year 4 to Year 6 students were encouraged to write their feedback about my scaffolding. They were guided to write comments on whether they could learn the content I taught. If they could learn this, they needed to write about how they did learn, how they practised Chinese and their feelings about learning Chinese. If they did not learn any Chinese, they were also asked to write comments about why they could not learn and what problems they were faced with. These tasks were exercises in meta-cognition. Then I analysed this evidence to learn whether there was a problem with my teaching methods, and especially with my scaffolding or the content of the lessons. Table 3.3 shows the allocation of various ways of document collection in each evidentiary chapter.


<table>
<thead>
<tr>
<th>Chapter</th>
<th>Research key words</th>
<th>The use of document collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Music-based scaffolding</td>
<td>1) A lesson plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) The PowerPoint as my teaching material</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Sociolinguistic-activity-based scaffolding</td>
<td>1) Chinese menu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Students’ work on my PowerPoint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) The PowerPoint as my teaching material</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) Students’ feedback about how they practised Chinese at the tuck-shop</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Pattern-based scaffolding</td>
<td>1) Lesson plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) The PowerPoint as my teaching material</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Students’ feedback about how they learnt Chinese with pattern-based scaffolding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) Students’ evaluation about pattern-based scaffolding</td>
</tr>
</tbody>
</table>

### 3.5.3 Reflection journal

During this research, my reflection journal provided an important means of data collection. According to Flick (2009) a reflection journal is an important way to generate evidence that can make a useful contribution to the process of theory building, linking knowledge and action. I used my journal to recount my experiences and identify possibilities for pedagogical action, as well as recording my changing educational perspectives and ideas about how to enhance the learnability of Chinese for my students. This reflective process allowed me as a teacher-researcher “to develop abilities to examine [my] experiences in relation to students, [my] values, abilities and [my] strength and weaknesses” (Farrell cited in Mariko, 2011, p. 70). As a beginning teacher-researcher, my reflection journal became an important tool to help sustain my pedagogical learning and for reviewing my efforts to combine my theories and practice so as to enhance the efficacy of my students’ learning. There were three guiding
questions that inform the development of my reflection journal (Mariko, 2011, p. 69):

1. describing the moments, events and issues and stating their significance
2. critically reflecting on the significant things learned
3. discussing future actions and intentions.

In my reflection journal, I wrote down details of the specific steps I used to scaffold my students’ learning, supporting my insights with examples. When I wrote something down, I always thought about the reason why it was important to note, and then wrote that reason in my journal. This helped me with the subsequent data analysis.

Table 3.4 demonstrates the different uses of reflection journal in each evidentiary chapter.

Table 3.4: The use of reflection journal in each evidentiary chapter

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Research key words</th>
<th>The use of reflection journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Music-based scaffolding</td>
<td>1) Evidence for why music might be used as scaffold</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Evidence for why behaviour engagement might be regarded as assisted performance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Evidence for a completed lesson about how to use music-based scaffolding</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Sociolinguistic-activity-based scaffolding</td>
<td>1) Evidence for how to scaffold students to make preparation for sociolinguistic activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Evidence for how to scaffold students to practise Chinese in a sociolinguistic activity</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Pattern-based scaffolding</td>
<td>Evidence for how to use pattern-based scaffolding for teaching students</td>
</tr>
</tbody>
</table>

3.5.4 Questionnaire

Questionnaire is an appropriate data collection tool for teacher-research, being suitable for collecting both quantitative and qualitative data. According to Flick (2011, p. 106)
the main characteristic of a questionnaire is its extensive standardization because it aims at producing “comparable answers from all participants”. I used a questionnaire to plan and formulate questions in an unambiguous way for a large number of participants to be involved. With the help of the questionnaire, I “organized the questions and received replies without actually having to talk to every respondent” (Walliman, 2011, p. 97). This made it convenient for me to administer a large number of questionnaires in a short time. According to Robson (2002), teacher-researchers can ask embarrassing questions with a fair chance of getting a true reply, because the researcher is not necessarily present. Here I considered the ethics of my dealing with children, as I was not seeking to ask any such embarrassing questions. I used a simple and straightforward questionnaire to study my students’ interest, sense of success and desire to continue learning Chinese (see Appendix 9 to Appendix 11). When the young students did the questionnaires, either classroom teachers or I explained the questions to them. They answered the questions by ticking answers or colouring in a symbol.

Table 3.5 provides a clear structure of how questionnaires were used in each evidentiary chapter.

**Table 3.5: The use of questionnaire in each evidentiary chapter**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Research key words</th>
<th>The use of questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Music-based scaffolding</td>
<td>Evidence for students’ evaluation for music-based scaffolding</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Sociolinguistic-activity-based scaffolding</td>
<td>Evidence for students’ evaluation for sociolinguistic-activity-based scaffolding</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Pattern-based scaffolding</td>
<td>Evidence for students’ evaluation for pattern-based scaffolding</td>
</tr>
</tbody>
</table>

**3.6 Data analysis**

This section demonstrates the process of data analysis employed in this study. Stage 1 was about data preparation, and was followed by Stage 2, data theorization. The latter stage employed open coding, content analysis and concept mapping as the methods for
data analysis. The last stage was about data interpretation. It explains how the data were displayed. By way of an overview, the data analysis procedures I used in this study can be visualized, as in Figure 3.1. I moved from reading the original data again and again, to and from the research questions; identifying key concepts through in-depth analysis of the primary evidence, creating categories and then reassembling data by looking for connections and logical relationships, and finally making interpretations that presented meaningful and defensible findings that answered the research questions.

Figure 3.1: The integration of data analysis, literature review, evidence and current findings

3.6.1 Stage 1: Data management

During this stage I focused on preparing the “raw” data and establishing a data management system. Boeije (2010, p. 72) argues that “proper data management contributes to transparency and facilitates the possibility for others to see what has transpired during investigation and analysis”. First, I organised different data files. These files contain my reflection journal, the digitally recorded and paper interviews, and students’ feedback and questionnaires. Second, I transcribed the audio-interviews, typed handwritten feedback into electronic files, and tabulated the answers given on the questionnaires. Third, data were reduced through a filtering process. I wrote down a list of the main ideas relating to the research questions, and read all the data again and again to make notes in the data indicating their connection with the ideas in the research questions. This work was informed by the Chinese metaphor: “读书百遍，其义自现” (dú shū bǎi biàn, qí yì zì xiàn). This metaphor means if you read the material
many times, you will come up with new ideas. I spent many weeks selecting the data through coding, classifying and comparing. At the same time, I extended my initial literature review to find more research related directly to my primary evidence. Finally, I was able to identify the most important and insightful components in my data set. This process is aptly captured by the metaphor “取其精华, 去其糟粕” (qǔ qí jīng huá, qù qí zāo pò), which means to take the essence and discard the dregs.

**Coding**

In this initial stage of my data analysis, coding was a key procedure that I employed. My process of coding proceeded as follows: “set aside, as much as possible, theoretical ideas or notions [summarised in the above literature review] so that the analytic, substantive theory [concepts] can emerge [from the data itself]” (Creswell, 2007, pp. 67-68). Overall, three types of coding were be used in this study, namely open coding, axial coding and selective coding (Robson, 2002).

For the purposes of open coding I began by classifying all of the data I collected into initial categories to identify units of analysis or evidentiary excerpts related to the phenomenon I was studying, as defined by my research questions. The basic analytic procedures I followed are “asking the questions about the data; [and] making comparisons for similarities and differences between each incident, event and other instances of phenomena” (Flick, 2009, p. 310). With these properties, dimensions and concepts identified, I later developed more abstract categories in Stage 2 (Robson, 2002).

Axial coding was used to relate and create subcategories from the many categories I had generated. This was an inductive and deductive process that involved making comparisons and asking questions, such as I had done during the opening coding process. My purpose in using axial coding was to group the related categories and to give a more focused overview to the data set (Flick, 2009).
Compared with axial coding, selective coding helped me take the analysis to a higher level of abstraction and to further integrate categories generated so far. The analytical process of selective coding focused on identifying patterns in the data and the conditions under which these patterns applied (Flick, 2009). The result of this form of data analysis was “a substantive-level theory relevant to a specific problem, issue and group” (Robson, 2002, p. 194).

![Figure 3.2: The spiral of interrelated analysis in the teacher-research process (Source: Boeije, 2010, p. 90)](image)

3.6.2 Stage 2: Data theorization

Data theorization was the most important part for me as a teacher-researcher, in determining whether I had produced valuable and reliable data. I wanted to know how the data would help me answer the research questions. This process built on the opening coding of the data undertaken during Stage 1. Content analysis and concept mapping were employed for data theorization.
Content analysis

A standard procedure to analyse text material is content analysis. This data analysis technique is an empirically grounded method that allows for the “systematic, inter-subjectively transparent description of substantial and formal features of messages” (Früh cited in Flick, 2011, p. 133). The procedure for content analysis which I used in this study can be divided as indicated in Figure 3.3 below. First, the data to be collected was defined in relation the research questions and the situation in which it was produced. Following this evidentiary material was classified to give the direction to subsequent analysis guided by reference to the theoretical framework and the research questions. The analytical steps produced categories which I used to summarise and explain the data. Third, the results of data analysed were interpreted according to the research questions.

Figure 3.3: Process of content analysis (Adapted from Flick, 2011)

According to Merriam (2009), data can usefully be analysed using a pre-existing framework. For each of the following evidentiary chapters, I also provided a framework relating to scaffolding to undertake such an analysis.
Concept mapping

Concept mapping is a useful tool for dealing with a large data set. According to Hay and Kinchin (2006, p. 129) concept mapping can be used as “a graphic organisational technique designed to help individuals (and groups), explain and explore their knowledge and understanding of a topic”. For the purpose of this study, concept mapping had the advantage of being able to speak to practice and theory, knowledge and action. Concept mapping provided me with a way of developing an evidence-driven theoretic-pedagogical framework. It also provided a basis for me to establish pedagogical criteria through which I created multiple concept maps over time to explore changes in students’ learning. A distinguishing feature of this concept mapping is that it provided for “deep versus surface or holist versus serialist approaches” (Hay & Kinchin, 2006, p. 127) to understanding the data. In my research, I used concept mapping to provide a higher order analysis of the data I collected.

I created the concept maps through the following steps. First, the key concepts were selected out from the content. Second, more specific and subordinate concepts were selected from the content. Third, by linking the concepts by arrows I connected the key concept with the subordinate concepts. Here, it should be mentioned that the hierarchical structure of the concept map “depends on the context of the knowledge” and “the topic considered” (Reitano & Green, 2013, p. 202). Fourth, I created cross links to make the concept maps more sensible or meaningful. Finally, the maps were structured to ensure they satisfied the following criteria: “all concepts are linked to form propositions; all concepts from the key concept to general concepts and subordinate concepts (within a hierarchy) form a hierarchy; concepts within hierarchies are linked to other concepts in other hierarchies by cross links to indicate knowledge structures are linked across all hierarchies; statements accompany linking arrows” (Reitano & Green, 2013, p. 203).
3.6.3 Stage 3: Data interpretation

Data interpretation was a significant stage in my research because this is when I could best answer my research questions. “The transforming the data into findings” (Boeije, 2010, p. 94) was the aim of my analysis during this stage. In other words, my main focus at this stage was on how to make the data into meaningful findings which provided an original contribution to knowledge in the field of making Chinese learnable for monolingual English speaking students in primary schools.

After analysing the data, I invested considerable time in thinking about what I had really found out through my research process. I also thought about the most appropriate way to express or otherwise present my ideas and findings clearly and reasonably. So I chose visual displays to express my ideas. Boeije (2010, p. 124) points out that “drawing figures, flow charts, maps, decision trees is an excellent way for researchers to test what they know and do not know regarding their topic”.

Boeije (2010) argues that a table of contents for each chapter can help a teacher-researcher develop “your ideas and especially the order or logic of the presentation” (p. 134) and “raise awareness about the possible gaps in the available knowledge and stimulate thinking about how to fill these gaps” (p. 124). I made an advantage of such tables, dividing them into two or three rows. The first row listed the key words. This informs the reader as to what key ideas are to be discussed. The second row identified primary evidence from the students, classroom teachers and the tuck-shop attendant. It related their evidence about my teaching and students’ learning to the key ideas in the first row. The third row in each table referred to relevant secondary evidence with citations to the research literature.

Graphs or maps were also important for generating my interpretation of the key findings for this study. Boeije (2010, p. 125) points out that these two ways “clearly illustrate the structure of the findings” and “enable the researchers to present a lot of
information in a concise manner”. I used computer software to make relevant concepts maps and diagrams.

In order to make my findings more reliable and reasonable, I subjected my initial findings to critical reflection, but on interactions between data analysis presented in the evidentiary chapters and the literature review. This helped me look for more appropriate ideas and to establish better conclusions.

3.7 Conclusion

To sum up, this chapter (Chapter 3) has explained and justified the research process design the study reported in this thesis. It included an account of the theoretical basis for the research process, the selection of the research sites and participants and the reasons and specific steps of using particular research methods. At the same time, it illustrated the design of the data collection procedures and the process of data analysis, all of which were directed at making this study more reliable. It provides an outline for the self-study narrative inquiry I used to generate evidence on music-based scaffolding, sociolinguistic-activity-based scaffolding and pattern-based scaffolding. Ethical issues were taken into account throughout this study, both for respect and legal concerns. Overall, the research reported here has been guided by principles of credibility, trustworthiness, triangulation and generalisability. Together all these elements of the research process provide considerable confidence in the reasonableness and reliability of the analysis presented in the following evidentiary chapters.
Chapter 4: Music-based Scaffolding

4.1 Introduction

Working with young children in Kindergarten to Year 3 requires specific knowledge and capabilities. What Chinese words and sentences could I teach them? How could I teach them? I decided to investigate music-based scaffolding as a means of making Chinese learnable for young children. In this chapter, “music” refers to songs, including video music clips. Music-based scaffolding refers to the dynamics of teaching/learning whereby I used music to structure the children’s progressive learning of Chinese. This means I had to consider a Chinese song that would be appropriate for them to learn, to analyse the complexities of what was to be learnt, and then to structure this learning to have the students progress successfully from what they know to what they can learn.

This chapter starts by analysing the reasons why music might be useful for scaffolding young children’s learning of Chinese, followed by analysing evidence of the assistance I provided to enable this learning. In order to show the specific use of music-based scaffolding, evidence from a completed lesson is presented. The value of music-based scaffolding is analysed through the evidence of my students’ learning, as well as evidence from classroom teachers and myself. The evidence analysed in this chapter comes from my reflection journal and lesson plan, interviews with classroom teachers, and the questionnaires completed by my students.

4.2 Reasons for using music to scaffold learning

This section analyses the evidence for why music might be used to scaffold the learning of Chinese. A key reason for using music to make Chinese learnable is the
characteristics of young children.

### 4.2.1 Similarities between musical and language processing in the brain

This section analyses the reasons why I used music to scaffold the teaching/learning of Chinese. The evidence is from my reflection journal.

My first lesson in Australia totally failed. I was not able to teach Kindergarten students to say the numbers in Chinese. It might be the problem of my teaching strategy because I asked the students to follow my pronunciations and repeated the content again and again. They felt boring and I was also disappointed with myself. There is only one week for me to teach Kindergarten students to sing the Chinese number song because their performances in Chinese festival (an activity in school) would be hold in next week. How can I teach them to sing the song in only one lesson? There was no choice but to use music directly. I cut the song into to three pieces depending on the rhythm from the slow to the fast. I planned to teach students piece by piece. It was obvious that the young students were so happy and sensitive to the music. They listened to the music carefully and tried their best to follow the content in the song. It was amazing that some of them could sing it reluctantly. Now, the power of music helped them learn so quickly. When the music was played for the third time, it was amazing to find the majority of the students could sing it. It was so fantastic! Once the students could do the slowest one, I moved to the quicker one. They still did a good job. They had wonderful performance on Chinese festival. Music is worth doing research. (21 August 2012)

Supposedly, music and language are processed in a similar way by the brain. In the above extract, Kindergarten children listened to the music carefully then tried their best to follow the content of the song. Figure 4.1 illustrates how language and music influence each other in this processing (Scho & others, 2010). Apparently, language and music are processed in similar regions of the brain. This suggests that there could be an “ability of music to activate semantic concepts with some specificity” (Patel, 2008, p. 333). It may also mean that the region of the brain that is activated by music impacts on language learning. Rebuschat and others (2012, p. 201) claim that “language and music involve domain specific representations and when similar cognitive processes are conducted on these representations, the brain shares neural resources between the two domains”. The claim is that “musical and linguistic syntax are similarly processed” (Li
Because of this supposedly similar brain processing of music and language, the learning of Chinese might be stimulated by the use of music, so that Kindergarten students can learn Chinese more efficiently. In the lesson when there was no music, I repeated the content again and again, but failed to help my students to learn.

These claims about the similarity between musical and language processing in the brain were some of the main reasons for using music to scaffold young children’s learning of Chinese. Of course, this raises the question whether young children learn a language through various means, of which music is just one possibility. Thus, there had to be other, important reasons for using music to make Chinese learnable.

### 4.2.2 Catering for young children’s characteristics as learners

This section is concerned with young children’s characteristics as learners as these relate to music. Specifically, interviews with classroom teachers (n=3) explored what they saw as the reasons why music might be used to scaffold young children’s learning of Chinese. The reasons why the teachers thought music-based scaffolding caters for the learning characteristics of young students, is that it triggers their socio-cultural interest in music and helps overcome their timidity.
Table 4.1: Interviews with classroom teachers about the music-based scaffolding

| Key words          | Evidence                                                                                                                                                                                                 |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------================================================================--------|
| Memory triggers    | “Kids respond well to music…It is part of what we do to the babies, sing the songs. And it is that kind of thing that carries through…visual, oral, rhyme. You find the tune triggers memory. As the music goes that way, you can remember the words better, because you connect them.” (Teacher A) |
| Interest in music  | “They like music…because they like music at home. At weekend, they listen to the music and watch TV. So they like music. They participate very well when music is involved.” (Teacher B)                                |
| Timidity overcome  | “Some children are very shy, and do not want to say it aloud, so when you use a song, everyone sings it and has a go.” (Teacher C)                                                                        |

The rhythms and rhymes of songs provide scaffolds that may help students learn Chinese. Rogalsky and others (2011, p. 3843) argue that: “there are similarities in the way language and music structures [in the brain] are processed under some circumstances”. But Teacher A suggested that it is the socio-cultural features of music —its rhythm and rhymes—together with group-based experiences that activate language learning. Hargreaves, Miell and Macdonald (2012, p. 127) contend that the “activation of cognitive units” in the brain through pleasure spreads from one node to another node (or nodes) via links. Again, as Teacher A mentioned, people can remember the words of songs better, because of the rhythm and rhymes that connect them. These socio-cultural phenomena were activated by the music, which seemed to help these young students learn Chinese.

I used my students’ interest in music to make Chinese learnable. Renninger and Hidi (2002) claim that “a person’s interest is linked to his or her achievement with a particular subject content” (p. 173). Given my students’ regard for music, I used this to teach Chinese in ways in which they would achieve success. If I could succeed in having them achieve success in learning Chinese, and build their interest in continuing to do so, this could “lead to informed re-engagement and the ability and desire to work with difficulties that might arise” (Renninger & Hidi, 2002, p. 174). The challenge for me was to change my negative view that learning Chinese is meant to be difficult, then work to
enhance students’ success in learning Chinese, so they would have the desire to learn more.

Through music-based scaffolding, students’ timidity seemed to be minimised through the empathy caused by the music. Here, empathy refers to “the capacity to share others’ feelings and emotions” (Hargreaves, Miell & Macdonald, 2012, p. 317). The students’ happy and relaxed feeling from the learning of Chinese in this way, encouraged them to express their emotions through singing with their peers. The positive feeling of working with peers may have contributed to “a learner’s motivation and confidence in addition to the development of abilities and knowledge” (Boblett, 2012, p. 7). As Teacher C mentioned, students’ shyness was overcome through singing with others. This helped reduce the emotional burden of learning Chinese—an important consideration in scaffolding students’ language learning.

4.2.3 Songs as a medium of representation

This section elaborates on an unexpected situation in my Chinese lessons, which caused me to think more about the power of music. The following evidentiary excerpt is from my reflection journal:

Last week, I played the theme song of the cartoon named Journey to the West for twice. They liked it very much. The first sentence of the song was “猴哥，猴哥，你真太难得” (Monkey brother, Monkey brother, you are so great). At the same time, I made a joke with a funny boy and gave him the special name of “猴哥” (monkey brother) and sang the sentence again. I did not expect that they could learn it. However, today, when I mentioned “猴哥” (monkey brother) again, some students suddenly sang “猴哥，猴哥，你真太难得” (Monkey brother, Monkey brother, you are so great) together. I was shocked. Then a girl sang, “Ms Zhou, 你真太好!” (Ms Zhou, you are so good). I was shocked again. “How did you learn it and why did you sing like that?” I asked confusedly. The girl answered, “I remember you said ‘难得’ means ‘great’, and we have learned that ‘好’ means ‘good’. So I put the word to the song. It is awesome to learn Chinese with music.” (5 September 2012)

Songs provide students with “prosodic structures [that] are essentially language-specific
exemplars that are stored in rich phonetic and prosodic detail” (Rebuschat & others, 2012, p. 295). My students recognised the order of the words in the Chinese songs with the help of rhythm, and this helped them follow and remember it. At the same time, “the weight of the syllable (its prominence or accent or tone in Chinese) affects the manner in which its constituents (onset, vowel, coda) are phonetically realized”, meaning that “cues (such as changes in duration, stress and fundamental) carry important information about how sounds are ordered into words, particularly when the words are multi-syllabic” (Rebuschat & others, 2012, p. 295). In the above evidence, the sentence “猴哥，猴哥，你真太难得” (Monkey brother, Monkey brother, you are so great) consists of multi-syllabic Chinese words. For students to learn these, I knew it required them to listen and repeat these words more than once or twice. When the Chinese sentence was combined with music, the weight of the syllables in each word was carried by the melody, which made it more learnable for the students. When the students gained knowledge of the Chinese song through music, I worked with them to combine their prior knowledge of Chinese to form new expressions. In the above evidence, a girl who had learnt how to say “你真太…” (You are so …) with music, combined this with her prior knowledge of Chinese “好” (good) to form a new structure “你真太…” (You are so …) to produce a new sentence “你真太好” (You are so good).

This was important for me, allowing me to realise that the assessment of young children’s capability for learning Chinese could be judged by their producing new expressions in Chinese that I had not directly taught. When choosing music as teaching/learning material, songs with a strong rhythm would appear to be a good pedagogical choice, as this gives students necessary guidance and direction.

4.3 Learning Chinese through performance

This section analyses the evidence of young children’s learning of Chinese through music-based scaffolding, which provided a multi-sensory learning experience involving both cognitive and affective engagement. The primary evidence derives from my
4.3.1 Multi-sensory learning

The evidence below is from my reflection journal and is related to students’ behavioural engagement in learning Chinese.

Before I taught Kindergarten students to say body parts in Chinese, I played a Chinese video of a song named *Happy Song to Applaud*. This video contains song and action performed by cartoon characters. The words are directly linked with doing the actions. For example, if the words in the song name the body parts like “拍拍手” (pāi pāi shǒu: applaud hands), “跺跺脚” (duò duò jiǎo: stamp feet), I did the actions like applauding my hands and stamping my feet. The students followed me. When I showed the PowerPoint (see Figure 4.2), some students said “jiao” (the pronunciation for feet) suddenly. I was shocked. “How did you learn it?” I asked confusedly. The students said they learned it from the video, the stamping feet! The students could learn Chinese through music and associated physical activity. It was amazing! How powerful is behavioural engagement! (9 October 2012)

![Figure 4.2: A PowerPoint slide that students responded to me with “jiao” (脚: feet)](image)

This behavioural engagement with music seemed to help the students learn Chinese. The evidence from classroom teachers supports this proposition. Table 4.2 shows evidentiary excerpts from the interviews with the classroom teachers.

<table>
<thead>
<tr>
<th>Key words</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory association</td>
<td>“If you are using actions or doing gestures, they nearly always like to copy...They like to imitate.... Children are learning in different ways. So sometimes they like the visual, they like to see, they like</td>
</tr>
</tbody>
</table>
to touch, they like to do it physically, that is why they do action sometimes…This is the listening things. They can just hear what they want to do. That is why actually you involve all those three things.” (Teacher D)

| The connection to memory | “You put more senses in a lesson, sense of movement, sense of touch, sense of hearing, when you put action, you make something easy to remember, you have body movement…psychological reason might have more fun. And it makes a better connection….Connection is when you do them together, sing them and do the actions, so they can remember it. It is connecting ideas.”(Teacher E) |
| Nature-catering | “Australian students do not sit for a long time. They like to keep moving... They want to do various actions when they are learning.” (Teacher G) |

The evidence from my reflection journal and the interviews with classroom teachers indicates that behavioural engagement is important for the multi-sensory learning of Chinese. Behavioural and musical engagement enriches sensory associations in making Chinese learnable. Hargreaves, Miell and Macdonald (2012, p. 127) claim that “when a familiar stimulus is seen, heard, touched, smelt or even imagined, a series of nodes [in the brain] representing and associated with that stimulus are triggered through the spreading of activation”. In the above evidence, it was the action and image of stamping feet—and the song—that helped the students learn the word “jiao” (脚: feet). They responded to my actions and to the PowerPoint quickly. This indicates that very young English speaking students are able to learn Chinese with the use of appropriate teaching/learning strategies. The use of behavioural engagement and music for learning Chinese seems to enrich students’ sensory-associations by combining auditory, visual and physical senses. Teacher D pointed out that young students like to learn through such physical activities. Moving is one way in which young children explore their world.

Behavioural and musical engagement in learning Chinese words makes memorable sensory connections. Nevid (2013, p. 221) claims that such modes of learning are helpful for “holding visual information in your mind [which] stores and integrates
visual, auditory and possible other information”. In the above evidence, the stamping of feet was combined with visual information (the cartoon in the video) and auditory information (the pronunciation of “jiao”: 脚; feet) to give students specific guidance related to the meaning. Teacher D held that the combination of various senses made the required learning more memorable, because there was more information to scaffold students’ learning of Chinese.

Behavioural and musical engagement accords with the characteristics of young students, especially their interests in bodily movement and in imitating sounds. Teacher G pointed out that young Australian students like imitation, behavioural and auditory engagement as a key vehicle for their learning. Imitation can break down the Chinese language into intelligible, learnable language units (Singh, 2013) that students can reconstruct in accordance with a range of multi-sensory pedagogical schemata (Hargreaves, Miell & Macdonald, 2012). Young children have the ability to absorb multi-sensory information around them, which, if used appropriately can make them eager to learn Chinese. They learned “jiao” (脚; feet) through imitation, an important process for language learning. The initiative and the positive actions of these young children indicated their interest in learning Chinese.

4.3.2 Developing students’ cognitive and affective engagement with Chinese

This section analyses evidence from my reflection journal on how behavioural engagement can promote the development of young children’s cognitive and affective engagement with Chinese. Consider the following evidentiary excerpt:

In order to help students understand the story of Mid-Autumn Festival, I selected a video for students. There was nice music, pictures and English subtitles without English explaining orally. I took it for granted that the students would understand it. After it had finished, I asked whether they understood the story. To my surprise, the whole class said, “No”. I had to come up with a better teaching/learning strategy. I told them, “I will pick two students, one will act as Houyi (后羿; hòuyì, the hero in the story of Mid-Autumn Festival), another student will act as Change (嫦娥; cháng é, the heroine in the story of Mid-Autumn Festival). I will read the
subtitles for you. You need to follow my instruction and act the story out.” They became very excited. I also acted as a director, saying “Action”. Then the performance began. The students were engaged in the story. Their performance was so funny that the whole class (including the classroom teacher and myself) laughed happily. The atmosphere was positive. After several groups had finished performing, I asked them whether they understood the story again. They said confidently, “Yes”. How successful!! In the next process of learning Chinese, they learned more actively and seriously. (19 September 2012)

Role-playing seems to be a useful teaching/learning strategy to promote young students’ cognitive development. In the above evidentiary excerpt, the video shown to the students failed to help them learn Chinese culture. However, the role-playing, a form of behavioural engagement, helped to better scaffold the students’ understanding. This might be because role-playing “creates immediate motivation [or] physical and/or mental stimulation” (Dundara, 2013, p. 1425) that makes understanding Chinese culture more likely. Scaffolding the learning of Chinese culture requires the teacher to unpick “the high level of cognition” (Mitchell & Carbone, 2011, p. 259) involved, so that students can move from their operating level to a higher level of comprehension. As the teacher works to make Chinese culture comprehensible, the students seek deeper meanings and become more active learners in learning Chinese.

Behavioural engagement might also be important for the students’ affective engagement in learning Chinese. When my students were acting the story out, the atmosphere in the class was positive and relaxed. “High levels of interest or positive attitudes towards in learning task” (Mitchell & Carbone, 2011, p. 259) reflect and give expression to students’ affective engagement. Behavioural engagement stimulates “students to be productively engaged in learning tasks and [may] sustain that engagement without the need for continual encouragement or direction” (Chua, Wong & Chen, 2009, p. 58). However, teachers have to develop appropriate strategies and select appropriate content to engage students in learning Chinese and understanding Chinese culture. So teachers have to stimulate students’ behavioural and emotional engagement and give them a positive basis for learning more.
4.4 Using music-based scaffolding

This section explains the use of music-based scaffolding using evidence from a single lesson, the lesson design and actions. The evidentiary excerpts are from my lesson plan and my reflection journal.

4.4.1 Music-based scaffolding lesson design

This section analyses the key elements I considered in developing this lesson using music-based scaffolding. Table 4.3 explains my considerations when designing this lesson to teach and to have students learn the song “祝你生日快樂”（Happy Birthday to You）.

Table 4.3: Lesson plan for teaching/learning Happy Birthday to You

<table>
<thead>
<tr>
<th><strong>Topic:</strong> sing the song “祝你生日快樂” (Happy Birthday to You)</th>
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<tbody>
<tr>
<td><strong>Lesson aim</strong></td>
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<td></td>
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<tr>
<td><strong>Students’ level</strong></td>
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<td><strong>Lesson outline</strong></td>
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<tr>
<td><strong>Key teaching points</strong></td>
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<td></td>
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<tr>
<td><strong>Scaffolding strategy</strong></td>
</tr>
<tr>
<td><strong>Sources</strong></td>
</tr>
</tbody>
</table>

Table 4.3 shows a lesson design incorporating six key factors, namely: aim, students’ level, lesson outline, key teaching/learning points, scaffolding strategy and sources. The
The principles behind choosing a song or music to scaffold the learning of Chinese, as in the case of the song “祝你生日快乐” (“Happy Birthday to You”) entailed several criteria. First, students already knew the words and music of the song in English. The song was chosen because “学生容易接受的、节奏感强的、旋律活泼优美的歌曲” (it is easily accepted by students, with a strong sense of rhythm as well as a lively beautiful melody; Zhen, 2004, p. 54). Students’ knowledge of this song was likely to make it possible for them to experience the Chinese principle “吸引学生、感染学生，使他们产生联想以及想唱、想表演的欲望，从事使学生的兴趣和积极性都得到提高” (that is to attract students and deeply inspire them, to stimulate the desire for singing and performing. It was also useful in stimulating students’ interests and initiative; Zhen, 2004, p. 54). Once students’ desire to learn and perform is stimulated, this can be efficient in helping them become active learners. Second, the distinctive and repeated rhythm and melody of this song made it learnable in both English and Chinese. It is the beat in “祝你生日快乐” (Happy birthday to you) that is likely to help beginning Chinese language learners to “develop a sense of inner timing and allow children to speak in whole sentence instead of just one word at a time” (Li & Brand, 2009, p. 75). I expected that because the repeated rhythm and melody, as well as the words, were known to the students in English, this might help them say the sentence “祝你生日快乐” (Happy birthday to you) in Chinese. Such multilingual scaffolding might reduce students’ learning burden by providing them with an opportunity to practise the
sentence again and again, using what they know in English to build their confidence in learning Chinese. Third, there are possibilities for rearranging the Chinese words in the song, and for adding new words for the students to learn. The inserting of new words into the song and arranging the existing words can be scaffolded using Chinese words that “share the same auditory, perceptive, and cognitive mechanisms that impose a structure on auditory information received by the senses, according to the rules of syntax and harmony” (Besson, Chobert & Marie, 2011, p. 74). In my expectation, if the students could sing this song in Chinese, it would be possible for them to learn the new vocabulary using the same music, without increasing their cognitive load.

4.4.2 Music-based scaffolding in action

This section analyses evidentiary excerpts from the key steps involved in the music-based scaffolding of Chinese language learning. The lesson was divided into three stages.

4.4.2.1 Stage 1 of music-based scaffolding

This section is about the first stage for music-based scaffolding. The evidence has been selected from my reflection journal (2 February 2013).

In stage 1, there were several steps. As Figure 4.3 shows, the first step was to check whether all the students were familiar with the song by having them sing Happy Birthday to You in English. I encouraged all the students to sing the song in English. I made sure through observation that they all knew the song in English. Then the students were given the next task, namely, to copy my singing of the song in Chinese. They were encouraged to listen to me carefully and to pay attention to changes made in the shape of my mouth while making particular sounds. The purpose of singing the song in Chinese by myself, with music, was to provide clear pronunciation for the students to imitate. Then, when students were singing Happy Birthday to You in
Chinese, I observed their performance, checking how well they imitated my pronunciation. Those students who were on-task were asked to model for those students who were not. The students actively tried their best to copy my pronunciation.

Figure 4.3: The process of stage 1 in music-based scaffolding

In the first lesson, checking whether all students were familiar with the English version of the song meant having students practise it several times. In music-based scaffolding, if the rhythm is strong enough in an English or Chinese song, it is possible for students to learn the Chinese words because the music supposedly enhances “a coherent sound impression” (Hargreaves, Miell & Macdonald, 2012, p. 113). It is important to check whether all students know the song because in scaffolding, prior knowledge is important for new content learning—that is, “bridging or building on students’ prior knowledge to understand” (Gritter, Beers & Knaus, 2013, p. 415). Knowing the song in English, the students could focus on my pronunciation without worrying about the music or the meaning of the words. Their knowledge of this song in English provided the students with a connection to the Chinese version of the same song.

The students’ task was to copy my Chinese pronunciation. This collaborative interaction between the students and myself “had the potential to develop their
conceptual understanding of variation, which [could] provide an important orienting basis for the development of their performance abilities” (Compernolle & Williams, 2012, p. 39). This strategy has two advantages. First, it might enhance learning efficacy for the next step. The students imitated my pronunciation of the lyrics. Second, this helped me as a teacher of Chinese to diagnose or formatively assess what words in the song would require more specific scaffolding in order to make them learnable for the students. The above evidence provided me with the basis for organising more thoughtful modes of scaffolding; I would invest more time scaffolding specific words for the students to learn. So scaffolding is both a teaching strategy and a diagnostic skill.

4.4.2.2 Stage 2 of music-based scaffolding

This section is about the second stage of the music-based scaffolding of Chinese. The evidence is from my reflection journal (2 February 2013). Stage 2 of this teaching was divided into two parts (see Figure 4.4): namely, cultural comparison and language points. Cultural comparison included items (for example, clocks or shoes) that cannot be given as birthday gifts in Chinese culture. The language points were about how to make the pronunciation of Chinese words learnable. This meant my paying attention to language similarities between the English they knew and the Chinese they were learning, as well as changes in the shape of the mouth required to make a particular sound correctly. For example, my students were encouraged to say “生” (“shēng”) by smiling first, then listening to my pronunciation and then saying it themselves. They were also taught to say “祝” (zhù) appropriately through doing what I called the “lovely piggy mouth”, which I modelled for them. They were interested in learning Chinese. When they learned each new Chinese word, they were encouraged to make different gestures (like using their hands to draw circles in the air, and so on). They were so excited to participate in these activities.
In terms of learning to pronounce Chinese words better, transferring from the abstract to the visual may help students to say Chinese words better. Xu and Ye (2010, p. 52) claim that “人类发音器官的整个装置像一架乐器，分三大部分：动力（肺），发音体（声带），共鸣腔（口腔，鼻腔，咽腔）” (The human vocal organs are like a musical instrument. and are divided into three parts: power [lung], vocal apparatus [vocal cords] and resonance cavity [mouth, nose, and throat]). Figure 4.5 depicts the resonance cavity. The advantage of showing students the correct shape of mouth, such as the “lovely piggy mouth” to say “祝” (zhù), is that it can help students be more conscious about the physicality of pronunciation. The correct position of the tongue in the mouth can be visualised. The students found that making different shapes with their mouths and paying attention to their tongues, was an interesting aspect of learning Chinese.

In this lesson, the young students were asked to draw three circles in air while saying “祝你” (to you), “生日” (birthday), “快乐” (happy). They pronounced the Chinese words better and better, in part because “verbal interactions around these activities [drawing circles] promote their intellectual development” (Marks, 2011, p. 155). Their attitude towards learning Chinese pronunciation was positive, as was the whole class atmosphere. The students’ engagement promoted their learning efficacy.
4.4.2.3 Stage 3 of music-based scaffolding

This section is about the third stage of music-based scaffolding to make Chinese learnable. Once again, the evidentiary excerpts are from my reflection journal (2 February 2013). Stage 3 was divided into three main steps (see Figure 4.6). First, I checked students’ learning of the Chinese song without playing the music. I observed all the students singing and selected particular students to sing in Chinese. At this beginning stage, I had to give necessary reinforcement to those students who had forgotten how to say the sentence “祝你生日快乐” (Happy birthday to you). They could say single words like “祝你快乐” (Happy to you). For the second step, I played the music and sang the song by myself. Then the students did likewise, and they did a better job when singing along with the music. I selected several students to model for others and pointed out reasons for choosing them, such as their pronunciation and their confidence. The third step was to provide students with various ways of practising: competition between groups (boys competed with girls in singing), singing to classroom teachers, singing the song for the boy or girl whose birthday was near. The students enjoyed these ways of learning through multiple forms of repetition. The classroom
teachers were surprised by the students’ performance.

The usefulness of music in scaffolding the learning of Chinese might be because of “学生对音乐的敏感程度，接受能力，悟性都比较强” (students’ strong sensitivity to music, their ability to accept and comprehend; Zhen, 2004, p. 53). The development of their Chinese might at the same time, be due to both language and music are “auditory signals that are sequential in nature and that unfold in time” (Besson, Chobert & Marie, 2011, p. 2). I observed that some young students could not say the sentence “祝你生日快乐” (Happy birthday to you) very well without music; They missed some words or said the sentence reluctantly. However, when they were provided with music, their performance of the sentence “祝你生日快乐” (Happy birthday to you) was better; Eventually, more students could sing this song by themselves. The reason might be that if these words “are set to metrical music, a relationship is established between the syllabic accent patterns and musical metrical accent patterns” (Patel, 2008, p. 156). It seems that syllabic patterns simulated by musical metrical patterns help with the accent or tones. The students could take advantage of a song they knew in English to learn and internalize the same song in Chinese.

Figure 4.6: The process of stage 3 in music-based scaffolding
4.5 Evaluation of music-based scaffolding

This section focuses on the evaluation of the music-based scaffolding from students (n=75), classroom teachers (n=7) and myself. The evidence comes from student questionnaires, teacher interviews and from a self-evaluation framework adapted from Maggioli (2012). The function of music-based scaffolding in students’ learning of Chinese is analysed.

4.5.1 Students’ evaluation of music-based scaffolding

Table 4.4 shows the results of the evaluations of the music-based scaffolding of Chinese by 75 students. There were 25 students in each of Year 1, Year 2 and Year 3 respectively. One of the strange things emerged from the data was that on a number of occasions the results across two year levels were the same. This surprised me. However, it is the true and accurate reflection of the data.

Table 4.4: Students’ evaluation of music-based scaffolding

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Degree</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much did you like copying the teacher’s pronunciation at the beginning of the lesson?</td>
<td>Strongest</td>
<td>68% (17)</td>
<td>76% (19)</td>
<td>68% (17)</td>
</tr>
<tr>
<td></td>
<td>Stronger</td>
<td>16% (4)</td>
<td>20% (5)</td>
<td>12% (3)</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>16% (4)</td>
<td>4% (1)</td>
<td>20% (5)</td>
</tr>
<tr>
<td>Question 2</td>
<td>Degree</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>How much did you like to do gestures when we learn new words?</td>
<td>Strongest</td>
<td>68% (17)</td>
<td>64% (16)</td>
<td>72% (18)</td>
</tr>
<tr>
<td></td>
<td>Stronger</td>
<td>20% (5)</td>
<td>36% (9)</td>
<td>16% (4)</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>12% (3)</td>
<td>0% (0)</td>
<td>12% (3)</td>
</tr>
<tr>
<td>Question 3</td>
<td>Degree</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>Did the “lovely piggy mouth” and smile make it easier for you to say the words?</td>
<td>Very easy</td>
<td>60% (15)</td>
<td>72% (18)</td>
<td>72% (18)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>20% (5)</td>
<td>20% (5)</td>
<td>24% (6)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>20% (5)</td>
<td>8% (2)</td>
<td>4% (1)</td>
</tr>
<tr>
<td>Question 4</td>
<td>Degree</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>How easy was it for you to learn “Happy birthday to you” in Chinese?</td>
<td>Very easy</td>
<td>84% (21)</td>
<td>84% (21)</td>
<td>76% (19)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>8% (2)</td>
<td>16% (4)</td>
<td>16% (4)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>8% (2)</td>
<td>0% (0)</td>
<td>8% (2)</td>
</tr>
<tr>
<td>Question 5</td>
<td>Degree</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
</tr>
<tr>
<td>How much did you like to learn</td>
<td>Strongest</td>
<td>84% (21)</td>
<td>92% (23)</td>
<td>84% (21)</td>
</tr>
</tbody>
</table>
Question 1 focused on students’ desire to imitate my singing and pronunciation of Chinese. Year 2 students experienced the strongest preference (76%), followed by Year 1 and Year 3 students (68% in both cases). In respect of the lowest preference, only 4% of the Year 2 students indicated this, while the figures were 16% and 20% in Years 1 and 3 respectively.

Question 2 was based on students’ desire for behavioural engagement in learning Chinese. Year 3 students had 72%, followed by Year 1 students and Year 2 students with 68% and 64% respectively. However, in terms of the weakest desire for behavioural engagement, the percentage of Year 2 was zero, while in both Year 1 and Year 3 the figure was 12%.

Question 3 aimed to find out whether the students thought using visual aids could make Chinese learning easier. 72% of students in Year 2 and Year 3 and 60% of Year 1 students, thought this was useful scaffolding device. In terms of the “not easy” choice, 20% of Year 1 students chose this answer, while only 8% of Year 2 and 4% of Year 3 students did.

Question 4 focused on assessing the use of music-based scaffolding in making Chinese learnable. The majority of students (84% of students in Year 1 and Year 2, 76% in Year 3) thought learning the Chinese version of the song “祝你生日快乐” (Happy Birthday to You) was helpful. Only a small percentage of students (8% in Years 1 and Year 3; nil percent in Year 2) thought it was not easy. This suggests that music-based scaffolding could reduce the cost or burden of learning Chinese for such students.

Question 5 aimed to find out whether the students thought music was appropriate to help them learn Chinese. A high percentage of students liked to learn Chinese using a song they already knew in English (92% in Year 2 students, 84% in Year 1 and Year 3).
This suggests that the use of songs that students know in their first language could help them learn a second language.

To sum up, the students provided positive feedback, suggesting that it is reasonable to use music-based scaffolding to make Chinese learnable.

4.5.2 Classroom teachers’ evaluation of music-based scaffolding

Table 4.5 presents the evidentiary excerpts from the interviews with classroom teachers (n=7) to assess my music-based scaffolding.

**Table 4.5: Classroom teachers’ evaluation of music-based scaffolding of Chinese**

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Classroom teachers’ evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checking background/</td>
<td>Making sure students know what they are starting. Positive reinforcement by rewarding those who are close to or can do it. (Teacher H)</td>
</tr>
<tr>
<td>Students’ prior</td>
<td>Liked the introduction of the lesson, picking “happy birthday” is something the students were familiar with. Like the way you let students get up and interact with the song. (Teacher I)</td>
</tr>
<tr>
<td>knowledge</td>
<td>Stage one checks for prior knowledge of the song to be used, which is important otherwise the teaching of Chinese words won’t work. (Teacher J)</td>
</tr>
<tr>
<td>Meaningful</td>
<td>Singing to students makes it more relevant: Happy birthday. (Teacher K)</td>
</tr>
<tr>
<td>Explicit instruction</td>
<td>Instructions are clear and explicit teacher models. So students can hear and see what is expected. (Teacher J)</td>
</tr>
<tr>
<td></td>
<td>Explicit teacher instruction is used as well as students experimenting prior to teacher’s instruction. (Teacher F)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 2</th>
<th>Classroom teachers’ evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided</td>
<td>Cultural comparison is a wonderful idea. (Teacher L)</td>
</tr>
<tr>
<td>Explicit practice</td>
<td>Adding this element engages students who need this to keep them on task. (Teacher H)</td>
</tr>
<tr>
<td></td>
<td>Engage students in practice to check and re-teach. (Teacher J)</td>
</tr>
<tr>
<td>Focused</td>
<td>Includes positive reinforcement. (Teacher D)</td>
</tr>
<tr>
<td>Physical prompts</td>
<td>Physical reminders during pronunciation are good as it will help reach more students’ styles of learning. Drawing on language similarity is also good as it gets students to use prior knowledge again. (Teacher</td>
</tr>
</tbody>
</table>
The evidentiary excerpts in Table 4.5 point to a range of advantages regarding the use of music-based scaffolding to make Chinese learnable.

First, students’ prior knowledge of music in this instance, their knowledge of a specific song in English, was important because it was “a temporary structure erected to help with building or modification of another structure” (Pol, Volman & Beishuizen, 2010, pp. 271-272). The temporary structure provided by the students’ knowledge in English enhanced their ability to build another structured knowledge, of the song in Chinese. Teacher I mentioned that checking students’ prior knowledge of the song in English
“accentuated relevant features of the task and model solutions to the task” (Davis & Miyake, 2004, p. 266). Teacher K supported my modelling of how to sing, as it helped scaffold what was expected of students, and also built an active relationship between students and teacher.

Second, in stage 2, the students were “provided with rich resources and instructional innovation that were carefully designed” (Li, 2010, p. 272). This behavioural engagement gave students physical prompts, scaffolding “the needs of heterogeneous groups of children so that they benefit from participation” (Pentimonti & Justice, 2009, p. 245). As Teacher H mentioned, this helped enrich more students’ learning. Teacher F also saw the physical reminders as helpful. At the same time, stage 2 provided different ways for the students to learn more Chinese, by reworking this song further. Cultural comparison was supported by Teacher L, because it helped students know the cultural background and the meaning of the song in China. Using language similarity in this song maximized the students’ prior knowledge in English, while stressing the shape of the mouth helped students learn to pronounce the Chinese words better.

Third, purposeful and meaningful music performance in stage 3 involved independent work and group work that “maintained the students’ goal direction” (Nguyen, 2013, p. 69). Students built their confidence as they demonstrated their knowledge of how to use what they had learned. Teacher L mentioned that the reason that students loved singing in Chinese was that knowing the song gave them a sense of achievement. This is beneficial for students’ further learning of Chinese, because “their interaction is characterised by shared positive affect” (Granott, 2005, p. 145). The evidence from Teacher F also showed that it was good for students to learn Chinese through a variety of teaching/learning activities.

To sum up, music-based scaffolding requires a detailed and concise dynamic process to make Chinese learnable. The students’ knowledge of the English version of the song minimized the cognitive load required for the students to learn new content in Chinese. This made the Chinese song more readily learnable for these young students. The steps
in music-based scaffolding had to cover a variety of possibilities to make Chinese learnable for those students, giving students a necessary sense of achievement and confidence.

### 4.5.3 My self-evaluation of music-based scaffolding

Table 4.6 is a framework adapted from Maggioli (2012) which was used to analyse my scaffolding.

**Table 4.6: My self-evaluation of music-based scaffolding**

<table>
<thead>
<tr>
<th>Scaffolding function</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A higher degree of effectiveness</td>
<td>Considerable of effectiveness</td>
<td>Some effectiveness</td>
<td>Limited effectiveness</td>
</tr>
<tr>
<td>Recruitment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of degrees of freedom</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction maintenance</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marking critical features</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Frustration control</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstration/Modelling</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Recruitment—that is, engaging the learner—was effective through music-based scaffolding. First, students had an interest in singing songs. This particular song was also useful, because they knew it in English through singing it at birthday parties; now they could learn to sing the Chinese version at such parties. These young students also liked to move their bodies and they were excited when I sang this song for them in Chinese.

Reduction of the degrees of freedom—that is, developing the task around manageable
components, had some degree of effectiveness. My students were quite familiar with the English language version; I made sure all the students could sing their version. To reduce the learning burden, I taught the sentence “祝你生日快乐” (Happy birthday to you) in three parts (“祝你”, “生日”, “快乐”) by using specific strategies. Further, at the beginning of stage 3, the students needed the music to help them, which indicates I needed to do further work to ensure they had really learnt the song.

Direction maintenance—that is, ensuring the learner is on task, served as a higher degree of effectiveness. Having the students copy my pronunciation was meant to help them become more familiar with words. The cultural comparison provided more perspectives for them to learn about 生日 (shēng rì: birthday). These various ways of practising Chinese built a positive attitude in them towards learning Chinese. This success stimulated them to learn more.

Marking the critical features of Chinese—that is, highlighting the crucial aspects of a task, was considerably effective. For instance, I encouraged the students to pay attention to the shape of mouth, in formations like “smile” and “lovely piggy mouth”. This transferred abstract ideas into concrete visual illustrations.

Frustration control—that is, reducing the frustration level of a task, had a higher degree of effectiveness. At the beginning of stage 3, the students had not learnt to say the sentence “祝你生日快乐” (Happy Birthday to You). However, playing the music helped them learn the sentence. They gained confidence in singing and learning Chinese.

Demonstration or modelling—that is, providing students with possible ways of reaching a solution, had considerable effectiveness, as my own singing provided a model for the students to hear the Chinese pronunciation, while attending to the shape of mouth showed them the way to say Chinese words.
4.6 Conclusion

This chapter has presented an analysis of evidence indicating how the music students were familiar with might be used to scaffold their learning of Chinese. Music-based scaffolding might be used for teaching Chinese in English speaking countries. The research question that was the focus for this chapter concerned how Kindergarten to Year 3 students’ knowledge of music could be used to scaffold their learning of the same song in Chinese. The evidence included excerpts from my reflection journal, a lesson plan, teaching/learning materials, questionnaires from students and interviews with teachers. The analysis of this evidence shows that students’ prior knowledge of a song in English and their musical sensibility can be used to scaffold their cognitive development and learning of Chinese. Language transfer from English to Chinese seemed to develop their cognitive and affective engagement. The evaluation by the classroom teachers and students suggests that music-based scaffolding can be useful and appropriate if it takes advantage of students’ prior knowledge and musical sensibility for learning Chinese.
Chapter 5: Sociolinguistic-activity-based Scaffolding

5.1 Introduction

Having students learn Chinese they can use in everyday sociolinguistic activities could be an important strategy for stimulating their interest in learning Chinese. Repeated use of the language could build a sense of achievement, as well as confidence. So how to teach students to use Chinese that is related to their everyday sociolinguistic activities, so that they can practise it in daily life by themselves, is an important research problem.

This chapter explores sociolinguistic-activity-based scaffolding, to find out about its possibilities for making Chinese learnable. Here, sociolinguistic activity refers to everyday sociolinguistic activities that happen in school. Specifically in this chapter, it refers to children’s use of language to buy food from the school tuck-shop or canteen. Thus, in this instance, sociolinguistic-activity-based scaffolding refers to teaching students to use Chinese instead of English, and using this activity to stimulate them to practise their Chinese. An analysis of the evidence regarding this form of scaffolding provided by the tuck-shop attendant, the students themselves and my own reflections, suggests that sociolinguistic activities like buying food at the tuck-shop, might be useful for helping them to learn Chinese. As a recurring everyday sociolinguistic activity, it provides them added practice with their Chinese.

Evidentiary sources in this chapter include students’ feedback, interviews with a tuck-shop attendant and a classroom teacher, my teaching/learning materials, and my self-reflection journal. These evidentiary excerpts are analysed, to explore how to select teaching/learning content, how to scaffold students’ knowledge of English to learn Chinese, and how to have them practise Chinese in a sociolinguistic activity such as
buying food at the tuck-shop. The aim is to increase their time-on-the-task for learning Chinese outside my classroom. This chapter also provides a vivid picture of how students practised Chinese in an everyday sociolinguistic activity, the difficulties they faced, and how they engaged in self-scaffolding to overcome these difficulties.

5.2 Selection of the teaching/learning content

This section analyses an instance of content selection for sociolinguistic-activity-based scaffolding. For many Australian primary school students, the tuck-shop (canteen) is a site for everyday sociolinguistic activity in English. They are familiar with the English used there, and they visit it each school day. The following evidentiary excerpt from my reflection journal is about how this teaching/learning content was chosen:

I went to the school for the preparation of tuck-shop topic. I must know the specific forms of English used by my students at the tuck-shop. I introduced myself to the tuck-shop attendant and explained my purpose. I wanted my students to use the Chinese they learned in my classroom to buy food at the tuck-shop. I also wanted to know whether and how they used Chinese when buying food at the tuck-shop. The tuck-shop attendant supported me and agreed to record the names of the students who bought food using Chinese. Then I observed all the food at the tuck-shop and took photos for them. At the same time, I also consulted with the tuck-shop attendant about what kind of English expressions that students use frequently. Finally, I asked for an English menu and made a record of what kind of food was bought often. (13 February 2013)

Knowing students’ sociolinguistic activities is important for choosing what Chinese content to teach them, and the careful choice of content is necessary to scaffold students’ learning of Chinese, as well as developing their self-scaffolding capabilities. Students bring to school the English “language practices of their home communities and cultures” (Shatz & Wilkinson, 2013, p. 13). I investigated the English expressions frequently used by my students, to help me as a teacher-researcher “organize and codify their sociolinguistic knowledge [in English to] understand how those practices [may] impact [on the] new experiences [of learning Chinese]” (Shatz & Wilkinson, 2013, p. 13). Through consulting with the tuck-shop attendant, I had derived a basic idea of the
food students like, and the English language expressions they used frequently at the tuck-shop. It would have been more helpful if I had recorded the actual English the students used, so I could learn about their sociolinguistic capabilities. However, this gave me some guidance in choosing appropriate Chinese teaching/learning content for my lesson preparation. Choosing to teach the language for purchasing food at the tuck-shop in Chinese, provided relevant, practical and memorable content for the students and provided them added opportunities to practise their Chinese. By remembering this content, their internalization of it was likely to give them a sense of achievement, and to make it possible for them to develop their self-scaffolding capabilities.

5.3 Scaffolding students to prepare for sociolinguistic activities in Chinese

This section analyses evidence of how I scaffolded students’ learning of Chinese to help them prepare for using Chinese in their everyday sociolinguistic activities. My scaffolding consisted of five tasks: namely, motivating the students, bridging phonemic similarities between their English and the Chinese to be learnt, choosing learnable units of language to teach, and doing a simulation to rehearse the use of Chinese in the designated sociolinguistic activity. The evidences given here are from my reflection journal.

5.3.1 Motivating students

This section provides an elaboration of my effort to motivate students to meet my expectations. This evidentiary excerpt comes from my reflection journal:

At the beginning of the class, I told the students, “I am going to teach you how to use Chinese to buy food at the tuck-shop. The purpose of these lessons is to have you learn Chinese words which you can use to buy food at the tuck-shop”. They were curious about how they could achieve this goal. I could feel they were eager because they looked at me and listened to me very carefully and seriously. (6 February 2013)
Working with students’ curiosity seems to be a useful strategy to structure their interest. To have them accomplish such a task, I had the responsibility to develop appropriate teaching/learning methods that would contribute to “the students’ motivation and confidence in addition to the development of [their] abilities and knowledge” (Boblett, 2012, p. 8). My students were curious about how it would be possible for them to use Chinese at the tuck-shop. Their interest in learning Chinese was stimulated, and they made an affective investment in learning Chinese. The students’ curiosity about buying food at the tuck-shop using Chinese may have reflected their desire to realise their potential learning capacities.

5.3.2 Bridging phonemic similarities between English and Chinese

This section explicates the process of using students’ knowledge of English to learn Chinese words. The evidence from my reflection journal relates to how I guided students to achieve this goal:

There were specific photographs of students’ favourite food in my PowerPoint and Chinese characters for the names of food. There was no Chinese pinyin. I asked them to write down the Chinese pronunciations using phonemic similarities between English and Chinese. I explained, “Listen to my pronunciation of a Chinese word carefully, and then write down the spelling in English. For example, if I say ‘lihai’ (厉害: lì hài), you can write like this—leahi, because in English ‘ea’ behind ‘l’ can be pronounced as ‘e’ while it behind ‘h’ should be pronounced as ‘i’, right?” The explanation was companied with writing down an example. Surprisingly, most of students raised their hands for the desire to have a try. A boy was picked and I said the word “wan wan” near him, at the same time, I noticed that all the students listened very carefully. Once finished, the answer written by the student was typed onto the PowerPoint (see Figure 5.1). The whole class was encouraged to say it so I could check whether the word was written correct or not. “Wan wan” was the first one and easy for them to write. When it came to honey soy chips (Chinese people call it “potato chips”, it was difficult for them. So I slowed down my speech and hinted them the first word may be difficult, they listened to me very carefully and did a good job (see Figure 5.1). It was surprising they learned these words well and quickly. (6 February 2013)
Bridging the phonemic similarities between the children’s knowledge of written English and what they could learn in Chinese, seems to be a useful strategy to scaffold their internalization of Chinese. The main reasons for this are as follows.

First, the students’ existing knowledge of English provided a stepping stone for them towards their developing knowledge of Chinese. This teaching strategy “helped bridge the gap between old knowledge and developing knowledge” (Mascolo, 2005, p. 45). For example, when my students heard “shǔ piàn” (薯片: honey soy chips), they wrote “shuw pyen”. For them, “u” in pinyin sounds similar to “uw” in English, while “ian” in pinyin sounds similar to “yen” in English. This scaffolding strategy used what the students were familiar with to learn Chinese pronunciations.

Second, this scaffolding strategy seemed to promote the students’ learning efficacy. Their desire to write down the right answers stimulated them to pay more attention and thus listen very carefully to my pronunciation of Chinese. I encouraged them to use their immediate knowledge of English and to stretch their minds, “making new connections that lead to the development of higher-level thinking” (Ramey, 2010, p. 77). When the students were selected to do the task, they looked at me seriously and paused a while to think before they wrote down the words. This pause was an important sign of their self-scaffolding. Their seriousness reflected the higher-level thinking they did, in using their prior knowledge for learning Chinese; promoting their internalization of the target language.

Third, the transfer of authority involved in this scaffolding strategy also seemed to
promote enhanced intellectual engagement with learning Chinese. A common way to teach Chinese words is for a teacher to show students Chinese pinyin using PowerPoint and to tell students how to say them. Then, the pronunciations of these words are practised over again and again, through repetitive activities. In this approach to teaching Chinese, students are regarded as passive receivers, with no knowledge of their own to contribute to learning Chinese. However, in my lessons, the students became active learners because they could use their authority regarding what they already knew in English to help them learn Chinese. They seemed to become the “master” of their own learning because they could use English to help learn Chinese. They did it seriously, were eager to engage, and showed others their answers. In this process, the students took greater responsibility for learning Chinese and did a good job. In all learning, it is the learner who must do the learning.

5.3.3 Choosing learnable units of language

This section analyses evidence of how the “learnable units of language” (Singh, 2013) were used, in reflection of the students’ current levels of knowledge of English and Chinese:

My initial plan was to teach students to say “请问这个多少钱?” (May I ask how much this is, please?). It is a very polite sentence. The students could say, “A 多少钱?” (How much is A?). I had to work out how to scaffold their learning so they could say the whole sentence “请问这个多少钱?” (May I ask how much this is, please?). So I decided to have them learn to say “A 多少钱?” (How much is A?) rather than the more complicated “请问这个多少钱?” (May I ask how much this is, please?). They could say the sentence of “A 多少钱?” (How much is A?) smoothly and correctly. I decided to teach them “请问这个多少钱?” (May I ask how much this is, please?) next week rather than in just one lesson. (13 February 2013)

Selecting “learnable units of language” (Singh, 2013) requires teachers to present elements of Chinese to students while they are able to learn successfully within a given lesson. Warner (2011) argues for using students’ pre-existing sociolinguistic resources
to make meaning in a process by which speakers combine them in a particular context: “Meanings are not merely exchanged, but constructed, confirmed and contested through language” (Warner, 2011, p. 10). During the teaching/learning process, I developed a tolerant and patient attitude towards students’ mistakes, using them as the basis for scaffolding their learning, rather than criticizing or dismissing them. Given that all the students were beginning learners of Chinese, I also reflected on the role of scaffolding in dealing with the ineffability of meanings in English and Chinese; the elusiveness of English/Chinese translation, and the potential symbolic and social connotations of what is said in English and Chinese. These issues cannot be addressed with beginning language learners. My efforts to make Chinese learnable focused on forms of scaffolding that were built on perceived language similarities.

Second, learnable language units reduce complex, burdensome learning tasks by “breaking them down into manageable chunks that students have a real chance of learning” (Tutner & Berkowitz, 2005, p. 175). I taught the students to say, “请问这个多少钱” (May I ask how much this is, please?). “请问” (May I ask…please?) was a challenge for them to learn at the beginning. So I first taught them the sentence “这个多少钱” (How much is this?) rather than “请问这个多少钱” (May I ask how much this is, please?). In Chinese, “这个多少钱?” is not as polite as “请问这个多少钱” (May I ask how much this is, please?), but the former still can be understood by speakers of Chinese. This expression does not impact negatively on the communicative use of language.

5.3.4 Doing simulations

This section analyses evidence from my reflection journal, of the scaffolding steps involved in the simulation of a real-world sociolinguistic activity. Simulation was useful for the students, to become familiar with the use of the relevant Chinese language before they put it into practice. The evidence is:
In order to help students practise Chinese at the tuck-shop, I did a simulation in classroom in the end of second lesson on this topic. The foods on the menu were borrowed from tuck-shop and a Chinese menu (see Figure 5.2) and paper money were also prepared. The scaffolding process was divided into several steps.

1) Teacher’s expectation was told to students. I informed them that I hoped they would practise Chinese at the tuck-shop. The tuck-shop attendant already learned the relevant Chinese which I had taught them, so she could understand what they would say.

2) A model was offered to the students. I acted as the tuck-attendant and picked a good-level student as the buyer. Opportunities were given to each student to act as tuck-shop attendant or buyer.

3) Guidance was given to students to connect common mistakes to strengthen their pronunciation.

4) I told the students that the tuck-shop attendant would record their names so I could know who practised their Chinese and who did not. (13 February 2013)
<table>
<thead>
<tr>
<th>Pictures</th>
<th>Chinese pronunciation</th>
<th>Chinese characters</th>
<th>English name</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oreo</td>
<td>olio</td>
<td>奥 利 奥</td>
<td>Oreo Biscuits</td>
<td>$ 1.20</td>
</tr>
<tr>
<td></td>
<td>Wan wan</td>
<td>旺 旺</td>
<td>Want wants</td>
<td>30 C</td>
</tr>
<tr>
<td></td>
<td>Budding</td>
<td>布 丁</td>
<td>Mini puddings</td>
<td>20 C</td>
</tr>
<tr>
<td></td>
<td>k ler</td>
<td>可 乐</td>
<td>Mineral Water Cola</td>
<td>$ 2.00</td>
</tr>
<tr>
<td></td>
<td>Mi bon</td>
<td>米 棒</td>
<td>Rice stickers</td>
<td>$ 1.20</td>
</tr>
<tr>
<td></td>
<td>Shuw pyen</td>
<td>薯 片</td>
<td>Honey Soy chips</td>
<td>$ 1.70</td>
</tr>
<tr>
<td></td>
<td>e ping shua</td>
<td>水</td>
<td>Small water</td>
<td>$ 1.00</td>
</tr>
<tr>
<td></td>
<td>Gua jui</td>
<td>果 汁</td>
<td>Popper juice</td>
<td>$ 1.70</td>
</tr>
</tbody>
</table>

Figure 5.2: A Chinese menu based on students’ English knowledge
Simulation provides a specific life-like situation for students to rehearse a given sociolinguistic activity, to assert their knowledge of relevant Chinese and to allow the teacher to analyse their learning and learning strategies. Dundar (2013, p. 1427) defines simulations as “a structured set of circumstances that mirror real life and in which participants act as instructed”. These simulations helped the students shape the event, carry out their tasks and practise their Chinese communicative skills.

During the simulation, the mistakes made by students were corrected. My corrective feedback enhanced their learning efficacy and strengthened their memory of the important language points. The several simulations done in the classroom provided another way of revising, as well as the repetition necessary for language learning. The students were stimulated by the situation to use the language again and again, thereby making repetition enjoyable rather than boring. It also established a clear set of steps to be performed by the students, which reduced the emotional burden of using Chinese at the tuck-shop: reducing their sense of confusion and uncertainty helped reduce their anxiety.

Doing simulations in the classroom scaffolded the students’ learning of Chinese through co-operation and guidance from their peers and teacher. This made them aware in advance of the mistakes they might make, and meant they could correct it. This seemed to give them more confidence to practise Chinese by themselves.

**5.4 Scaffolding students to practise in sociolinguistic activities**

This section is structured around three kinds of scaffolding activities: by myself, by the tuck-shop attendant; the students’ self-scaffolding. The evidence is from my reflection journal, interviews with the tuck-shop attendant and students’ written feedback.
5.4.1 Teacher’s scaffolding

This section analyses how I followed up students’ sociolinguistic activities at the tuck-shop and scaffolded them to make further use of their Chinese. The following evidentiary excerpt is from my reflection journal:

The first time for following up students’ practice was the next week. Before going to the classroom, I consulted the tuck-shop attendant and checked the name list recorded for me. There were four students’ names on the list. This showed that only a few students practised Chinese at the tuck-shop by themselves. I also asked tuck-shop attendant the reasons for this. She said my students were afraid of being laughed by other younger students. Then in the classroom, I used positive energy to stimulate the students. First, the four students on the name-list were rewarded and given high praise. Other students admired them as it could be judged from the emotions on their face. I explained the reasons why some students could get my nice rewards. Then I cut the process of practice into small pieces again to scaffold each step so it was learnable for them. My students were encouraged to recall what they learnt in the last lesson step by step. They were told that what they did it in class; they could also do at the tuck-shop. What’s more, I explained that the younger students were just curious about them. It was not laughing. I also explained that tuck-shop would like to help them and there was also the Chinese menu to help them. The students said that they would have a try. I looked forward to their performance. (20 February 2013)

Dividing the learning tasks into manageable chunks—learnable language units—seems to be useful for scaffolding students’ practice of Chinese in everyday sociolinguistic activities. I paid close attention to what my students did and said at the tuck-shop. Then I took advantage of “choosing simple cases to work on first, moving to idealization by breaking the [task] down into sub-problems [and] making use of recourse” (Bickchard, 2005, p. 169) to help my students know that they could do it. This helped students reduce the burden of language learning for students and enhanced their confidence in practising Chinese at the tuck-shop. To scaffold my students in the classroom, I cut the task into learnable segments, working from the knowledge with which students were familiar. Manageable learning tasks gave students a sense of safety, because they knew what they could do. Scaffolding the students’ learning tasks helped them build their confidence to practise Chinese in everyday sociolinguistic
activities.

For sociolinguistic-activity-based scaffolding, I followed up students’ practice, became familiar with students’ current practice at the tuck-shop, and investigated the reasons for their performance, whether successful or otherwise. I investigated the problems they faced. Having considered the problems the students faced, I, as a teacher-researcher, worked to find ways to solve them. It was necessary for me to divide the learning tasks into manageable and learnable language units. For the students to achieve step by step, I gave them appropriate feedback and assistance as needed, to practise their Chinese. Teaching is a dynamic and circular process.

5.4.2 Supportive people’s scaffolding

This section analyses evidence of how the tuck-shop attendant scaffolded the students’ learning of Chinese when they faced problems using it in sociolinguistic activities. The evidence below is from the interview with the tuck-shop attendant.

I: How did you help the students if they forgot or lacked confidence to practise Chinese here?

Attendant: [I would say], “It is ok, we have got plenty of time, take your time, have a look and go”. Then they will think, “Oh, I am not holding anybody up.” In the class, you should reward them. The rewards will be the biggest motivation to encourage them to use. You should reward them first. It is fun and new knowledge to learn. I encouraged them verbally, “Have a go”, “Come on”, “You can do it”, “Let’s have a go”, “Take your time”, “There is plenty of time.”

This feedback was an important strategy for reflecting on sociolinguistic-activity-based scaffolding. Students’ language learning “can be facilitated if they are provided with adaptive prompting and feedback scaffolding designed to regulate their learning” (Azevedo & others, 2012, p. 218). In the above evidentiary excerpt, the feedback directly catered for the students’ problem. The students needed time to recall the Chinese they had learned before they could say it. They feared being laughed at, or
being pressed to hurry by the other students who were queued behind them. The tuck-shop attendant identified their problems and gave them plenty of time, using instructional English phrases like, “Take your time, you can do it”. This encouragement reduced the students’ anxiety and helped them feel relaxed, even though they might be holding the other students up. Then they could focus on recalling the necessary Chinese, and say it step by step. Without the encouraging feedback from this supportive attendant, the students might have given up, due to the pressure from other students. If they gave up once, it might be more difficult for them to have a try next time. Encouraging feedback seems to be useful for helping students to take a step towards practising Chinese as an everyday sociolinguistic activity.

5.4.3 Students’ self-scaffolding

This section provides an analysis of the evidence of students’ self-scaffolding. It shows how sociolinguistic-activity-based scaffolding was transferred to students’ self-scaffolding. The evidence analysed here is from the students’ written feedback (see Table 5.1).

Table 5.1: Factors influencing students’ self-scaffolding

<table>
<thead>
<tr>
<th>Key words</th>
<th>Evidence of students’ self-scaffolding</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-practice</td>
<td>I practise by looking at the list at the tuck-shop and practise at home sometimes. I also learn by listening when the lesson is in the progress. I enjoy learning Chinese with Ms Zhou and I hope I can talk in Chinese fully. (F/Y5)</td>
<td>Self-practice can be regarded as students’ cognitive engagement. The strategies students use to realize self-practice are: 1) observing 2) recalling 3) identifying 4) vocalizing 5) applying</td>
</tr>
<tr>
<td></td>
<td>I practise by closing my eyes in line at the tuck-shop and thinking of the Chinese words for what I want. I love learning Chinese with Ms Zhou and hope that I can speak it like her when I am older. I also practise at home when I am watching TV. (F/Y5)</td>
<td></td>
</tr>
</tbody>
</table>

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| **Self-motivation** | I like the opportunity to learn Chinese and use this language in our everyday life and at the tuck-shop and speaking to myself. The tuck-shop idea is absolutely fantastic. I like being able to interact and I would like to learn how to read and write the basics. (F/Y6)  
I practise by looking at the list what I want and then close my eyes and say that word in Chinese like English. (F/Y5)  
Self-motivation can be regarded as students’ affective engagement. The strategies students use to realize self-motivation are:  
1) self-confidence  
2) self-satisfaction  
3) self-achievement  
4) self-encouragement  
5) negative emotion control |  
| **Self-scaffolding** | I like to buy food from tuck-shop, I like to buy budding, ke ler and ow li ow. I feel excited when I talk to tuck-shop ladies in Chinese and I would like more interactive lessons. I enjoy your lessons and I am very confident when I talk in Chinese and when I learn a new word I instantly go and tell my mum in Chinese. (F/Y6)  
I feel proud to speak Chinese in front of myself, and in front of the canteen. I feel kind of confident. (M/Y5)  
I feel using Chinese in the canteen is a bit embarrassing but I still like to do it. I feel learning about Chinese in the classroom very good and enjoyable. I love it. It is very fun. (F/Y4)  
I love learning Chinese, I might get confused sometimes, but I ignore it out and enjoy it. (M/Y6)  
I love learning Chinese with Ms Zhou, so when I go to the tuck-shop, I can say it in Chinese and the students laughed at me but they are jealous because they do not know how to say it in Chinese. (F/Y5)  
Self-scaffolding can be regarded as students’ internalised cognitive engagement for learning. Strategies employed by students to realise self-scaffolding include observing, recalling, identifying, vocalizing, visualizing and applying. The above evidence shows that some students used visualizing as a strategy while listening to the teacher's lesson and watching television to learn Chinese. They closed their eyes and thought about what they had learned, as a way of recalling, identifying and integrating what they had |
learned. This strategy provided them “access to [their] inner order as they externalize it” (Knouzi & others, 2010, p. 46). They regulated their process of cognition through externalizing their internalized prior knowledge. Students used vocalizing as a strategy, speaking to themselves to practise Chinese, catering for “a form of internalised conversation in which [they] interrogate their epistemic self” (Holton & Clarke, 2006, p. 128). All of these self-scaffolding strategies paved the way for the students to move from passive recipients into active practitioners of Chinese. Moreover, students increased their “awareness of languaging as a useful tool and [modelled] successful languaging activities” (Knouzi & others, 2010, p. 46). This cultivated their learning through self-scaffolding and maximized their success in learning Chinese.

Self-scaffolding also impacted students’ affective engagement. The self-scaffolding strategies used by students to realize self-motivation included self-confidence, self-satisfaction, self-achievement, self-encouragement and negative emotion control. The evidence, indicating that they “feel confident”, “feel proud” and “enjoy”, illustrates the link between self-confidence, self-achievement and self-satisfaction. These forms of self-scaffolding “marked [an] improvement in [their] ability to solve tasks” (Tunteler & Resing, 2010, p. 8), which demonstrated the interaction between their practice of Chinese, and positive emotions about doing so. Self-encouragement and negative emotions are interlinked in language learning. For students to control or restrain their negative emotions, they need self-encouragement and self-esteem. Students under the influence of negative emotions, like nervousness, embarrassment or confusion, experienced “cognitive conflicts, mediating mental processes, and constructing meaning in general” (Knouzi & others, 2010, p. 23).

To sum up, self-scaffolding helped students develop their self-scaffolding better and made it possible for them to be confident and active Chinese learners. However, there are also some negative factors impacting on the students’ self-scaffolding. Table 5.2 summarises evidence of this from the students’ written feedback.
Table 5.2: Evidence of factors working against students’ self-scaffolding

<table>
<thead>
<tr>
<th>Key words</th>
<th>Students’ evidence</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative emotion</td>
<td>I would like to learn other food in Chinese. Sometimes I don’t feel confident buying food from the canteen. (F/Y5)</td>
<td>Summary of negative emotions: 1) not confident 2) afraid of getting it wrong 3) worried about being laughed at 4) feel embarrassed 5) get scared</td>
</tr>
<tr>
<td></td>
<td>The canteen is a good place to practise and when I practise I get the pronunciation wrong so I get shy and sometimes don’t want to practise. But Chinese is really fun to do and cool. (M/Y5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel worried because the kids might laugh at me if I get it wrong. (M/Y6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I felt a bit worried about practising at school and worried I’ll get laughed at. (M/Y5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel so embarrassed. I feel good about learning Chinese. (F/Y5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes I get scared to say. [But] Chinese is the best thing to learn at school. I love to learn Chinese. (F/Y5)</td>
<td></td>
</tr>
<tr>
<td>Low learning level</td>
<td>I have not used Chinese to order at the canteen, because it is a bit hard for me. (M/Y6)</td>
<td>Difficulties in Chinese impacts the application &amp; learning attitude</td>
</tr>
<tr>
<td></td>
<td>I have not been to the canteen. Because I forget what to say. But it is fun to learn Chinese. (M/Y6)</td>
<td></td>
</tr>
<tr>
<td>Lack of family support</td>
<td>I am not allowed to buy canteen stuff. But if I was allowed I am sure I’d do well. (F/Y5)</td>
<td>Negative family element hinders student’s practice</td>
</tr>
<tr>
<td>Inadequate teaching resources</td>
<td>If there is something on the list I will say it in Chinese, if not, I cannot say it. (M/Y6)</td>
<td>The problem of balance between limited teaching time and students’ desire</td>
</tr>
</tbody>
</table>

Table 5.2 indicates a range of factors working against the students’ self-scaffolding, including negative emotions, low level of Chinese learning, lack of family support, and inadequate teaching/learning resources.

Negative emotions were a major barrier for the development of students’ self-scaffolding. Lack of confidence, worries about getting the Chinese wrong or being embarrassed by being laughed at for using Chinese, or feeling scared: all of these emotions impacted negatively on students’ self-scaffolding. Some students could say
Chinese very well in the classroom, but did not practise it at the tuck-shop. This was a key issue for me as a teacher-researcher to address. I needed to put more effort into building the students’ confidence, providing them with more opportunities to practise their Chinese before they used it in sociolinguistic activities. What’s more, I needed to carefully analyse the success of other students’ self-scaffolding strategies and explicitly teach these to the students, especially those who were experiencing negative emotions.

Evidence of a low level of successful learning can be analysed from two perspectives. First, the complexities of Chinese had not been unpacked sufficiently, and this hindered students’ practice. This required me to rethink my scaffolding strategies for making Chinese learnable. Second, some students’ negative attitudes towards learning impacted on their learning efficacy. A positive learning attitude helps one to internalize knowledge of Chinese; otherwise, students are merely passive learners.

Lack of support from some students’ families impacted their opportunities to practise Chinese as a sociolinguistic activity. The evidence about the student who was not allowed to buy food at the tuck-shop arose in two issues. First, one limitation on a student choosing to buy food at the tuck-shop was that parents did not give them money to pay for it. Second, some parents had negative attitudes towards Chinese or China, and this hindered students’ learning. The latter is a challenging issue to address.

With regard to the inadequate teaching/learning resources, this created a problem of balancing manageable learning tasks and students’ learning needs. The time for Chinese teaching and learning in class was very limited. It is impossible to teach all the food at the tuck-shop in one lesson. However, if the food they wanted to buy was not on the Chinese menu, they could not practise saying it in Chinese. As a teacher of Chinese, I needed to be more flexible in teaching Chinese for a sociolinguistic activity. For instance, I could have taught the students to say the food in English while asking for the price in Chinese.
To sum up, self-scaffolding promoted internalization of the Chinese they were learning. However, students’ negative emotions, low level of learning, lack of family support and inadequate teaching/learning resources, worked against their self-scaffolding.

5.5 Evaluation of sociolinguistic-activity-based scaffolding

The focus of this section is on analysis of the evaluations of my attempts at sociolinguistic-activity-based scaffolding. Beginning with the student questionnaires, there is also evidence from the classroom teacher and the tuck-shop attendant, as well as from myself. The evidence is from student questionnaires and written feedback; an interview with the classroom teacher, the tuck-shop attendant, and from a self-evaluation framework adapted from Maggioli (2012).

5.5.1 Students’ evaluation of sociolinguistic-activity-based scaffolding

Table 5.3 records the outcome of the students’ evaluation of sociolinguistic-activity-based scaffolding. There were 15 Year 4 students and 20 students in Year 5 and Year 6 respectively (n=55). The evidence is from the questionnaires (see Appendix 10) completed by these students.

Table 5.3: Students’ evaluation of sociolinguistic-activity-based scaffolding

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How successful do you feel when you speak Chinese at the canteen/tuck-shop?</td>
<td>Very much</td>
<td>66.7% (10)</td>
<td>65% (13)</td>
<td>75% (15)</td>
</tr>
<tr>
<td></td>
<td>much</td>
<td>26.6% (4)</td>
<td>25% (5)</td>
<td>20% (4)</td>
</tr>
<tr>
<td></td>
<td>A little</td>
<td>6.7% (1)</td>
<td>10% (2)</td>
<td>5% (1)</td>
</tr>
<tr>
<td>Question 2</td>
<td>Degree</td>
<td>Year 4</td>
<td>Year 5</td>
<td>Year 6</td>
</tr>
<tr>
<td>How much really useful Chinese have you learned (about the tuck-shop)?</td>
<td>Very much</td>
<td>73.3% (11)</td>
<td>70% (14)</td>
<td>65% (13)</td>
</tr>
<tr>
<td></td>
<td>Much</td>
<td>20% (3)</td>
<td>25% (5)</td>
<td>25% (5)</td>
</tr>
<tr>
<td></td>
<td>A little</td>
<td>6.7% (1)</td>
<td>5% (1)</td>
<td>10% (2)</td>
</tr>
</tbody>
</table>

Question 1 focused on the sense of achievement students gained from practising their
Chinese at the tuck-shop. The aim was to find out the effect of sociolinguistic-activity-based scaffolding on the students’ practice of Chinese. The majority of students gained a considerable sense of success. However, in terms of the “very much” evaluation of success, the evaluation from Year 5 students (65%) was less positive than that of Year 4 and Year 6 students (66.7% and 75% respectively). This is also reflected in the choice of “a little” by 10% of Year 5 students, and 6.7% and 5% of Year 4 and Year 6 students respectively. Further work would be required to get all the students having a stronger sense of achievement in learning and using Chinese. Only a few students thought they had gained little sense of success. The percentages for Year 4 to Year 6 students were 6.7%, 10% and 5% respectively.

Question 2 aimed at finding out whether it was worth learning Chinese by relating it to sociolinguistic activities, such as at the tuck-shop. As with Question 1, a high percentage of students supported the learning of Chinese in this way as being useful. Year 4 students gave the most supportive evaluation, at 73.3%. The corresponding Year 5 and Year 6 responses were 70% and 65% respectively. Only 6.7% of Year 4 students, 5% of Year 5 students and 10% of Year 6 students thought it was of little use. Once again, further work would be needed to increase the number of students who see this as a really useful way to learn Chinese.

In general, the majority of the students gave positive evaluations of sociolinguistic-activity-based scaffolding. It is worth analysing the reasons for this. The feedback from students (see Table 5.4) reflects the reasons why students liked to practise their Chinese at the tuck-shop (see more evidence in Appendix 14).
Table 5.4: Reasons why students liked to practise Chinese at the tuck-shop

<table>
<thead>
<tr>
<th>Key words</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The reasons for a sense of success:</strong></td>
<td></td>
</tr>
<tr>
<td>Enjoyment</td>
<td>I feel happy and proud when I use Chinese in the tuckshop. I feel comfortable because I am talking Chinese in the tuckshop. (M/Y5)</td>
</tr>
<tr>
<td>Learning efficiency</td>
<td>I like going to practise at the canteen because it is easy and faster to learn there. I love Chinese because it is fun to learn. (F/Y6)</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>I feel proud of myself and I have learned Chinese at the canteen because I have always wanted to speak Chinese and learn to write Chinese too and I want to go to China and to the temple and the school. (M/Y6)</td>
</tr>
<tr>
<td>New identity</td>
<td>I would like to learn how to say a lot more words. Doing Chinese made me feel like I was someone new. (F/Y5)</td>
</tr>
<tr>
<td><strong>The reasons for usefulness of Chinese:</strong></td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td>It is very unique and I would like to learn more and teach my whole family because [they] encourage me to teach them more and more. So thank you for teaching me. I want you to teach me more. (F/Y6)</td>
</tr>
<tr>
<td></td>
<td>I think learning Chinese has been useful. I haven’t learned very useful things that I can teach other people. This experience has been very fun. (F/Y6)</td>
</tr>
<tr>
<td>Communication</td>
<td>I like the opportunity to learn Chinese and use the language in our everyday life and at the tuck-shop and speaking to myself. The tuck-shop idea is absolutely fantastic. I like being able to interact and I would like to learn how to read and write the basics. (F/Y6)</td>
</tr>
</tbody>
</table>

Table 5.4 indicates the reasons why students gave a positive evaluation of sociolinguistic-activity-based scaffolding. Their sense of success was borne of a range of factors, including enjoyment, learning efficacy, self-esteem and discovering a new identity. In this study, sociolinguistic-activity-based scaffolding realized the practical use of Chinese at the tuck-shop. This provided students with a reason to put the Chinese they had learned into practice, helped them to learn the language faster, and promoted their learning efficiency. In turn, the improved learning provided students with enjoyment and boosted their self-esteem, as they internalized their knowledge of Chinese. So students felt proud of themselves. The positive feelings included being confident, relaxed and proud of their learning success and their sense of achievement.
With regard to the usefulness of Chinese, the demonstration and communication opportunities gained from learning and practising Chinese made the students support sociolinguistic-activity-based scaffolding. The evidence about the students’ family situation indicates possible reasons for the sense of success they were able to demonstrate. At the same time, the evidence of liking to use Chinese in daily life and of being able to interact, shows that “communicative language ability is acquired through purposeful communication” (Hinkel, 2011, p. 619). The sociolinguistic-activity-based scaffolding helped the students’ communicative ability to “be realized in the production and interpretation of actual utterances” (Hinkel, 2011, p. 429). Students gained enjoyment and a sense of achievement from learning and using Chinese in daily life.

5.5.2 Classroom teacher’s evaluation of sociolinguistic-activity-based scaffolding

This section provides an analysis of the classroom teacher’s evaluation of sociolinguistic-activity-based scaffolding:

Maybe they have learned something they can put into practice. It has been practical, they can use it when they are at school and speak Chinese at canteen. It is the things they know, the things are familiar to them, and I think that is really important for them. If you teach them things outside school, it is a little harder to focus on. Inside the school, such as at the canteen, you are doing things relevant to students’ lives, especially their life at school. (Teacher O)

In the above excerpt, the teaching/learning content proved really useful and important. It was practical, and students were comfortable with it and “provided sensory contexts for [students] to make [new] knowledge memorable” (Gritter, Beers & Knaus, 2013, p. 415). For the students, the tuck-shop topic was part of their everyday English language source activities, and therefore useful for them. Second, the tuck-shop topic was about students’ school life, where they could practise their Chinese in the school. This relates to another issue, namely the supposed lack of appropriate places, both in the school and in the wider community, for Australian school students to practise Chinese. To increase the number of students learning Chinese, appropriate opportunities must be created for them.
to learn Chinese in school, because they need the time to do self-scaffolding and to get feedback from teachers or other supportive people associated with the school. Turner and Berkowitz (2005, p. 175) argue that “without the presence of social interaction and the use of mediational tool, language in particular, the concept of scaffolding would be detached from its defining characteristics and would be unintelligible”. Sociolinguistic-activity-based scaffolding means that students learn Chinese that relates closely to students’ everyday school life. They can then practise Chinese in the school, to internalize what they have learnt. As they learn it, they might use it in other places, such as at home with their parents.

5.5.3 A supportive person’s evaluation of sociolinguistic-activity scaffolding

This section provides an explanation of a supportive person’s evaluation of sociolinguistic-activity-based scaffolding. The following evidentiary excerpt is from an interview with the tuck-shop attendant.

The tuck-shop is a good place for them to practise Chinese. Because some of them come every day, once they have come up once and speak Chinese, then it is easier the next time, I found it easy for them to speak Chinese. At first, they will be a little overwhelmed, and then they think such a thing is not hard. It’s just words. So you can see on the roll that we marked on, in the last couple of weeks, the names are more and more, starting from very little to more and more. It is positive.

This evidentiary excerpt provides an insight into the advantages of sociolinguistic-based scaffolding. For those students who came to the tuck-shop every day, it provided them with real-world opportunities for practising Chinese. In effect, through “using experiences in their social environment, [the] children actively influence[d] their own development by inter-relating their various levels of understanding” (Shatz & Wilkinson, 2013, p. 12). At first, the students were overwhelmed, because they felt that speaking Chinese was daunting, or they were less than confident or shy. However, once they succeeded the first time, they did a much better job, over the next couple of weeks. This might be because their first successful experience of ordering food in Chinese at
the tuck-shop helped them inter-relate their understanding and practice of Chinese. The students seemed to think this was not so difficult. They were just words. So it was useful for the students to engage in practising Chinese through everyday sociolinguistic activities.

5.5.4 My self-evaluation of sociolinguistic-activity-based scaffolding

Table 5.5 is the self-evaluation of my effort at sociolinguistic-activity-based scaffolding. This self-evaluation was made in the light of the foregoing evidence from students and teachers.

Table 5.5: My self-evaluation of sociolinguistic-activity-based scaffolding

<table>
<thead>
<tr>
<th>Scaffolding function</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A higher degree of effectiveness</td>
<td>Considerable effectiveness</td>
<td>Some effectiveness</td>
<td>Limited effectiveness</td>
</tr>
<tr>
<td>Recruitment</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of degrees of freedom</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction maintenance</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marking critical features</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frustration control</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The function of recruitment—that is, engaging the learner—is marked as showing considerable effectiveness. There are two reasons for this. First, the students were familiar with the tuck-shop; they could put the Chinese they had learned into practice through everyday sociolinguistic activities. Second, when they practised their Chinese in these sociolinguistic activities, they gained a sense of achievement and confidence.

Reduction of the degrees of freedom—that is, developing the task around manageable
components—is regarded as having students use learnable units of language with a considerable degree of effectiveness. This is the main reason why I chose learnable units of language. For instance, I understood the complexity of the sentence “请问这个多少钱?” (May I ask how much this is, please?), so I changed it to have my students say “A多少钱?” (How much is A?). Later, I then taught them to say “请问这个多少钱?” (May I ask how much this is, please?), so they could learn this sentence very well.

My efforts at direction maintenance, ensuring that the learner is on task, had a high degree of effectiveness, as I observed the transfer from my scaffolding to students’ self-scaffolding. The sociolinguistic-activity-based scaffolding kept the majority of students advancing their learning in the appropriate direction because they practised their Chinese at the tuck-shop, where various difficulties to achieve their goal had been overcome. The students’ feedback provided valuable evidence of their own self-scaffolding.

My efforts to mark critical features of Chinese—that is, to highlight the crucial aspects of a task—were at a higher degree of effectiveness. This is because I took advantage of bridging phonemic similarities between the students’ English and the Chinese they were learning. I used the students’ knowledge of English sounds to help them learn Chinese pronunciation. This enhanced their capacity for learning Chinese words, and laid a good foundation for their practice at the tuck-shop.

Frustration control, which entails reducing the frustration level of a task, was reasonably effective. When I learned about the problems the students faced in practising Chinese at the tuck-shop, I gave them feedback and cut the tasks into more learnable units of language. I gave them specific advice, such as to look at the Chinese menus at the tuck-shop, or to ask for help from the tuck-shop attendant. More and more students began to practise Chinese at the tuck-shop, and developed their own self-scaffolding strategies. However, not all of the students practised Chinese at the tuck-shop, due to anxiety or to family factors. I was not able to solve these problems.
When it came to my demonstration—that is, providing possible ways of reaching a solution, such as through simulations—these showed a considerable degree of effectiveness. Through simulations, I taught students the specific steps concerning how to use Chinese to buy food at the tuck-shop. If they made mistakes, these could be corrected. This helped them to become more familiar with the steps involved in using Chinese in this sociolinguistic activity. It also enhanced their confidence, making it more likely that they would practise at the tuck-shop.

5.6 Conclusion

This chapter has analysed the primary evidence relating to the use of sociolinguistic-activity-based scaffolding. The analysis was divided into two main parts, namely, scaffolding students through a simulation, and practising Chinese in an everyday sociolinguistic activity. The specific type of activity that was the focus of this analysis was buying food from the school tuck-shop using Chinese. The first section focused on using the phonemic similarities between English and Chinese as a bridge to make Chinese learnable, especially by using learnable units of language to do the simulation. These were important strategies for sociolinguistic-activity-based scaffolding. Scaffolding from myself and the tuck-shop attendant helped the students to practise their Chinese. Self-practice and self-motivation were important strategies for the students to develop their own self-scaffolding. However, negative emotions, low levels of learning, lack of family support and inadequate teaching/learning resources, hindered the development of the students’ self-scaffolding capabilities.
Chapter 6: Pattern-based Scaffolding

6.1 Introduction

The time available for Australian beginning language learners to learn Chinese is limited. This is due, in no small part, to the inability of teachers of Chinese to make the language learnable by L2 learners in English speaking countries. How to make Chinese learnable in an economical way is a key issue for teachers of Chinese in Australia (Orton, 2008). This chapter focuses on how to use visual patterns in Chinese to scaffold students’ learning of Chinese.

This chapter provides an analysis of evidence relating to pattern-based scaffolding explored during my teaching in Australia. The notion of “pattern-based scaffolding” is complex. In this chapter, “pattern” refers to a discernible regularity in Han zi (汉字: ㄏㄢˊ ㄗˇ) and Pinyin (拼音: ㄆㄧㄣˊ ㄧㄣˊ). For example, in the following “猪肉” zhū ròu: pork; “牛肉”: niú ròu; beef; “鸡肉” jī ròu: chicken; “羊肉” yáng ròu: lamb, the discernible regularity in these four words is “肉” (ròu). It can be recognized in both the Han zi and Pinyin. Pattern-based scaffolding is a teaching process that uses these apparent consistencies in Han zi to make Chinese learnable for monolingual English speaking students in Australia. Evidence of these patterns or the visual attributes in Han zi are represented in tables and charts in this chapter. Three types of scaffolding analysed in this chapter are morpheme-pattern-based scaffolding, phrase-pattern-based scaffolding and sentence-pattern-based scaffolding.

Morphemes are the smallest grammatical unit in a language. For example, in the Chinese words 兰花 (lán hū : orchid), 莲花 (lián hū : lotus), 茉莉花 (mó lì hū :
jasmine), 菊花 (jú huā: chrysanthemum), the character “花” (huā) is a morpheme and means “flower”. Morpheme-pattern-based scaffolding is defined as a teaching process which uses morphemes which occur regularly to guide students learning Chinese words, by focusing on the visual attributes of Han zi. A phrase is a group of words. Examples of phrases in Chinese include “泡一泡” (pào yī pào: put something into water for a while), “试一试” (shì yī shì: have a try) and “走一走” (zǒu yī zǒu: take a walk). These have the structure of a phrase that is the “verb plus ‘yi ’ plus verb”.

Phrase-pattern-based scaffolding is defined as using discernible regularities in the structure of a group of words to guide students’ learning by focusing on the visual attributes of Han zi. Sentence-pattern-based scaffolding means using the discernible regularity in the grammar of a sentence to teach students Chinese, using the visual attributes of Han zi. For example, “我上学” (wǒ shàng xué: I go to school), “我上车” (wǒ shàng chē: I get into a car), “我上课” (wǒ shàng kè: I have a lesson).

The five sections in this chapter present an analysis of evidence of my efforts to scaffold students’ learning of Chinese. I used scaffolding to reduce the cognitive load so students could focus on patterns in the language to learn and then generate new words, phrases and sentences. In Chinese, this is called “举一反三” (jǔ yī fǎn sān: which means tell students the rules and give students an example, then students can produce more examples). The analysis focuses on the possibilities for making Chinese learnable by scaffolding recurring linguistic features in Chinese, so as to cultivate students’ ability to draw inferences that enable them to generate new terms. The data set for this chapter includes primary evidence from my reflection journal, students’ feedback and questionnaires, as well as interviews with Australian classroom teachers. The first section explains the two key pedagogical reference points used across the lessons analysed in this chapter, that were intended to promote the development of students’ self-scaffolding.
6.2 Pedagogical reference points

I had my students attend to the visual attributes of Han zi or pinyin, and make notes; I scaffolded their learning through moving from patterns based on morphemes through phrases to sentences in order to promote students’ self-scaffolding. The primary evidence below is from students’ feedback concerning these pedagogical reference points.

6.2.1 Using visual aids

I investigated the use of visual attributes as a potentially useful factor in the development of students’ self-scaffolding. The evidence below is from the students’ feedback. These three pieces of evidence are used because of the feedback on specific points on visual aids (see more evidence in Appendix 15).

The way I have learnt Chinese is by saying it in an easy pattern. We say a word in English and then think of it in Chinese, and then we would see on the board what the actual Chinese way is of saying that particular word. We also have a chart to help us remember the word. On the chart, there is an Australian version and a Chinese version of the word (see Figure 6.6 in 6.4.1). (F/Y5)

I can learn Chinese by using the table. I compare it to English. I think Chinese is fun to learn and is my best subject. (F/Y5)

I learn by using the pictures (see Figure 6.8 in 6.5.1) and all the photos and technology equipment. (F/Y6)

Learning with visual aids was meant to help the transfer from pattern-based scaffolding to self-scaffolding by catering to the students’ visual memory. Wheeler and Treisman (2002, p. 49) argue that “through various methods of grouping and organization, more and more bits of information are incorporated into one chunk, and consequently more total bits are remembered”. Pattern-based scaffolding focuses on a discernible regularity in Han zi such as morphemes, phrases and sentences. The purpose is to have students recognise recurring features of Chinese, so as to make it possible for students to have
clear information. This might maximize what they can remember. The students learned Chinese based on the pattern presented through a table which gave a clear comparison between Chinese and English. The key linguistic points presented in the tables combined the rules into visual groups to show the students a clear and organised pattern with reference to words, phrases and sentences. This reduced the students’ cognitive load to make Chinese learnable.

6.2.2 Making notes

I also had the students make notes so as to promote their self-scaffolding. The students’ feedback included the following comment. These three pieces of evidence are shown because they focus on making notes.

I learn it by writing down all the important things in my Chinese book (it is a note-book for them to write down key points) so I can learn. I also listen to Ms Zhou when she is telling us how to write and say numbers, weeks, days, time and food. (F/Y6)

I learnt Chinese because I kept reading my Chinese that is in my [note] book and Miss Zhou helped me a lot to learn Chinese and comparing English and Chinese helps too. (F/Y4)

I practise at home with my family and friends at school and I write everything in my [note] book. (M/Y5)

The process of having the students’ making notes provided them with access to material for them to review what they had learned and also aided their understanding of key language points by making notes in their own way. They could digest the knowledge as part of their review process and transfer it into cognition process. Miller (2005, p. 208) notes that “learning is stimulated by a matrix of external forces and internal cognitive abilities that both facilitate and constrain learning”. By encouraging students to make notes, I created an external force to scaffold their learning, while their reading of the language points they had written provided them with a way to internalise their cognitive ability. Making notes is likely to contribute to the development of students’ self-scaffolding. Now I turn to an analysis of
evidence from each form of pattern-based scaffolding.

6.3 Morpheme-pattern-based scaffolding

This section analyses evidence of the use of morpheme-pattern-based scaffolding for its potential to make Han zi learnable for English speaking beginning learners of Chinese. It explores the prospects for using various re-combinations of morphemes to teach the words which have similar visual attributes. The primary evidence is drawn from my reflection journal and teaching/learning materials I prepared.

6.3.1 Visualization of morpheme combinations

This section investigates my efforts to make morphemes visual through analysing my lesson plan (Table 6.1). It presents my main idea about how I planned to teach students to say “week” in Chinese with morpheme-pattern-based scaffolding.

Table 6.1: Lesson plan for learning “week”

<table>
<thead>
<tr>
<th>Topic: learning to say “week” in Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson aim</strong></td>
</tr>
<tr>
<td>Students can say “星期一”(Monday) to “星期日”(Sunday) in Chinese fluently and correctly</td>
</tr>
<tr>
<td>Students’ level</td>
</tr>
<tr>
<td>➢ Already know how to say “1” to “10” in Chinese</td>
</tr>
<tr>
<td>➢ Can recognize and write the Chinese characters from “一” to “十” (“one” to “ten”)</td>
</tr>
<tr>
<td>Lesson outline</td>
</tr>
<tr>
<td>➢ Quickly review numbers in Chinese</td>
</tr>
<tr>
<td>➢ Key points for teaching</td>
</tr>
<tr>
<td>➢ Practise through quick response to the English words in Chinese</td>
</tr>
<tr>
<td>Key points for teaching</td>
</tr>
<tr>
<td>➢ Guide students to find out the morpheme in the PowerPoint</td>
</tr>
<tr>
<td>➢ Use their English knowledge to learn the key words “星期” (xīng qī: the morpheme of week)</td>
</tr>
<tr>
<td>➢ Highlight “星期日” (Sunday; it cannot be said “星期七”)</td>
</tr>
<tr>
<td>Scaffolding strategy</td>
</tr>
<tr>
<td>Hints; explaining; highlighting</td>
</tr>
<tr>
<td>Resources</td>
</tr>
<tr>
<td>PowerPoint</td>
</tr>
</tbody>
</table>

123
<table>
<thead>
<tr>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>星期一</td>
</tr>
<tr>
<td>Tuesday</td>
<td>星期二</td>
</tr>
<tr>
<td>Wednesday</td>
<td>星期三</td>
</tr>
<tr>
<td>Thursday</td>
<td>星期四</td>
</tr>
<tr>
<td>Friday</td>
<td>星期五</td>
</tr>
<tr>
<td>Saturday</td>
<td>星期六</td>
</tr>
<tr>
<td>Sunday</td>
<td>星期日</td>
</tr>
</tbody>
</table>

Table 6.1 is the lesson plan for morpheme-pattern-based scaffolding. This lesson focuses on how to guide students to combine what they know, in this case, the Chinese numbers they have learned, with the new knowledge ("星期": the morpheme for "week") based on its visual attributes. Table 6.2 is a table that compares the structures of "week" in both Chinese and English. It shows the reason why these morphemes can be taken into consideration due to the discernible regularity, for instance "day" in English while "星期" in Chinese.

This lesson plan and associated teaching/learning materials capture my expectations as a teacher of Chinese regarding what Chinese I wanted students to learn and how they might learn it. There were two reasons why I thought it might be important to make it visual, for students to learn the morphemes in Han zi.

First, I thought the visualization of morpheme combination might make the structure of words clear. I expected the students to find the same pattern for "day" in English (see Figure 6.1). After seeing Figure 6.2, I wanted them to find the same pattern "星期" (xīng qī: the morpheme for “week”) in Chinese. By focusing on the similar structure between English and Chinese, I thought this might reduce the burden of learning.

Second, I thought it would be beneficial for students to transfer the teaching content into their knowledge. The strategy used in Figure 6.2 was meant to help students
“transform content into pictures termed visualizations [and then] transform these visualizations into knowledge” (Malyanov, Auriol & Lee, 2013, p. 223). During the lesson, I used the visualization of morphemes to transfer linguistic content, rather than abstract linguistic points. The morpheme “星期” was meant to be understandable.

![PowerPoint slide](image1)

Figure 6.1: The PowerPoint slide for students to find the same pattern in English

![PowerPoint slide](image2)

Figure 6.2: The PowerPoint slide for students to find the same pattern in Chinese

### 6.3.2 Morpheme-pattern-based scaffolding in action

This section presents primary evidence about how I put morpheme-pattern-based scaffolding into practice. Below is evidence from my reflection journal.

Today, I divided the lesson into different steps:

1) Encouraged students to say “１” to “１０” in Chinese. Asked some students to write “１” to “＋” (“１” to “１０”) on whiteboard. Their performance showed they learned them very well.
2) Showed students the Figure 6.1, asked them, “Can you find something in common?” They said there was a “day” in these words. I emphasised, “‘day’ can be regarded as the ‘same pattern’ in these words”. My purpose was to help them build the concept of “same pattern”.

3) When I moved the cartoon picture away in Figure 6.1, students said excitedly, “Oh, there is the same pattern in Chinese.” (see Figure 6.2). Then I asked the students to show us the same pattern in Chinese. Then they said, “Chinese “week” is so easy. It is just the pattern plus the Chinese number.”

4) I encouraged students to write down the pronunciation of “星期” (the morpheme of “week”) with their English and typed it on the PowerPoint (see Figure 6.3). Then I asked the students to say the word together.

5) I used finger pointing from “星期” to “一” Monday, “二” Tuesday (see Figure 6.3) while saying “星期一” (Monday), “星期二” (Tuesday), so the students understood my purpose and began to say with me “星期三” (Wednesday), “星期四” (Thursday).

6) It was in my prediction that they would say “星期七” (it is a mistake in Chinese) rather than “星期日” (Sunday). In their opinion, Sunday was the seventh day in a week, so it should be “星期七”. So I emphasised this language point: ‘星期日’ rather than ‘星期七’. ‘日’ means sun. Just like we can enjoy sunshine on Sunday. Now, say with me ‘星期日’. (1 May 2013)

Figure 6.3: The PowerPoint slide for students to practise “Sunday” in Chinese

Morpheme-pattern-based scaffolding calls for visualization through a focus on similarities among Chinese words. The steps I designed to encourage students to find these similarities (see Figure 6.1 and Figure 6.2) were necessary for me because I wanted to “assist students in recognizing the similarities between different contexts in which the same principle is applicable” (Lin & Singh, 2012, p. 1). I worked on the assumption that my students have the “ability to perform analogical problem solving between two problems that are similar” (Lin & Singh, 2012, p. 1). For example, through focusing on similarities across the Chinese words, I wanted my students to learn the
morphemic structure of Chinese for “week”. For me, this step was important to help beginning language learners to learn Chinese.

I divided the visualization in this scaffolding process into several parts.

1) Doing comparisons with visual content. Figure 6.1 was meant to help students focus on the English part while Figure 2 gave them the sudden surprise. It was intended to enhance their understanding of morphemes (such as the combination of “星期” and Chinese number).

2) The reviewing step. For example, my students pronounced morpheme “星期” using their knowledge as “sing chee”. I used a PowerPoint slide to review this. I hoped that the process of moving from the audio to the visual might enhance students’ learning because doing “a non-visual task concurrently [may] reduce accuracy” (Morey & Bieler, 2013, p. 163). By combining audio and visual, I wanted to help my students learn the word “星期”.

3) Highlighting. My highlighting of “星期日” with the explanation of “日” (rì: sun) and showing Figure 6.3 corrected students’ concept of “星期日” (Sunday) rather than “星期七” (a wrong way to say “Sunday”).

6.3.3 Morpheme-pattern-based self-scaffolding

Morpheme-pattern-based self-scaffolding refers to the process where I wanted my students to take responsibility for using morphemes to scaffold their own learning of Chinese. The evidence below focuses on the factors affecting students’ morpheme-pattern-based self-scaffolding. These two pieces provide information on how students transfer my morpheme-pattern-based scaffolding into their self-scaffolding (see more evidence in Appendix 15).

I follow easy patterns like “dan” (点: o’clock), “sing chee” (星期: week), “quie” (块: dollar) listening to you and following and writing. The easy Chinese finger counting is also a good reminder. (M/Y6)
I learned small words in Chinese. I also know that to say days we put “sing chee” then the number of what day it is. (F/Y5)

This evidence suggests that these students’ development of self-scaffolding was affected by four factors, namely morpheme learning, listening, writing and behavioural engagement. Morpheme learning uses a learnable unit of language to make it possible for students to learn new knowledge. Listing and writing are processes for reviewing and strengthening students’ knowledge of what they are learning. The actions of listening, following and writing indicate these students’ engagement in learning and absorbing the knowledge, and also reveals the steps he/she uses to scaffold his/her learning.

Now I will analyse evidence of the second type of pattern-based scaffolding, namely phrase-pattern-based scaffolding.

6.4 Phrase-pattern-based scaffolding

This section reports on my investigation into the use of phrase-pattern-based scaffolding and how I used it to develop students’ self-scaffolding. The analysis detail show I scaffolded students’ learning using the discernible regularity presented by the structure of phrases. The evidence is from my reflection journal and teaching/learning materials.

6.4.1 Visualization of structure change

The section analyses my efforts at the visualization of structure change in phrase-pattern-based scaffolding. Table 6.3 is the lesson plan which I prepared for teaching students to say “money” in Chinese with phrase-pattern-based scaffolding.
Table 6.3: Lesson plan for “money”

<table>
<thead>
<tr>
<th>Topic: learning to say “money” in Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson aim</strong></td>
</tr>
<tr>
<td><strong>Students’ level</strong></td>
</tr>
<tr>
<td><strong>Lesson outline</strong></td>
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<tr>
<td><strong>Key points for teaching</strong></td>
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<tr>
<td><strong>Scaffolding strategy</strong></td>
</tr>
<tr>
<td><strong>Resources</strong></td>
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</tbody>
</table>

Table 6.3 presents my planned teaching of phrase-pattern-based scaffolding. I planned to start by teaching the key word “块” (dollar) (see Figure 6.4). In my expectation, I thought it would be easy for my students to learn a phrase like “A 块”/ “A quie” (A dollars) (see Figure 6.5). The next step was for me to guide students to find the change in the phrase from “A dollars” to “A dollars B cents” through comparing English and Chinese (see Figure 6.6).

![Figure 6.4: The PowerPoint slide about the key word for “money”](image)
The evidence above offers an operational view of my plan to use visualization to teach structure change step by step. The comparison between Figure 6.5 and Figure 6.6 was used to illustrate the detailed changes in the structure of phrases in Chinese. I thought that this might make the language structure and points clear, for instance, the structure of the phrase “A 块”/ “A quie” and “A 块 B”/ “A quie B”. Shatz and Wilkinson (2013, p. 126) contend that such “graphic organizers and charts support students in their understanding of the content of the lesson”. Without the visualization of structure, it might be difficult to guide my students to learn this phrase, because “humans cognitively formulate knowledge based on the visualizations” (Malyanov, Auriol & Lee, 2013, p. 223). I anticipated that the demonstration of visual change “increases the correctness of interpretation of the visualized information” (Malyanov, Auriol & Lee, 2013, p. 229). Otherwise, it might be difficult for my students to understand how the
way of saying Chinese money changes when it comes to (A dollars B cents) with oral instruction, but without visual attributes.

6.4.2 Phrase-pattern-based scaffolding in action

Presented below are the specific steps I used when teaching by using phrase-pattern-based scaffolding. The evidence here is from my reflection journal.

The lesson steps can be listed as follows. At the beginning, I showed students the PowerPoint of Figure 6.4, they learned the word for “块” (dollar), with language similarities quickly. Second, I showed them the PowerPoint of Figure 6.5 for helping them to say integral “money” in Chinese. They felt it was easy and learned quickly. The third step was important. I showed them the PowerPoint of Figure 6.6. It was easy to judge that they were confused through their emotions on their faces. Then I guided them, “Today I still want you to learn Chinese with a pattern. First, look at this table (Figure 6.6) carefully. What you have found?” One student said, “There is no ‘cents’ in the Chinese bar.” Another student pointed at the right bar (Chinese bar)with a finger and said: “There is no- ‘0’ here.” Their answers were what I looked forward to. Then I made a summary, “To some extent, Chinese can be easier than English. First, when one word like ‘cents’ is omitted, it does not impact the meaning in Chinese because another word ‘块’ in this phrase can take the place of the function of ‘cents’. Second, the structure is easy. For example, in Chinese prices, the ‘cents’ is missing and the ‘0’ is also missing, so ‘10’ becomes ‘1’ and ‘20’ becomes ‘2’.” The students nodded their heads in agreement. In the following practice, students could say this in Chinese fluently. (15 May 2013)

Three main analytical points concerning the use of phrase-pattern-based scaffolding are worth exploring here.

First, by looking for similarities between English and Chinese (see Figure 6.5), the structure was easy for students to find, so they learned it quickly. However, when it came to Figure 6.6, the students had no idea about the structure at the beginning. So it was necessary to guide students to look for similarities first.

Second, to encourage students find out how the structure changes step by step, I minimized the task to reduce “learning constraints” (Li, 2010, p. 255). When dealing
with complicated concepts, the logic should be clear, so “L2 learners will be able to reallocate their short-term memory” (Li, 2010, p. 255). The students were first guided to find missing “cents” before finding the missing “0”. This laid a good foundation for me to explain that because there is no “cents” in Chinese, then “0” in the cents part should be deleted.

Third, the way of presentation of the visual attributes on PowerPoint slides made it possible for my students to observe. If the students had only listened to my spoken words without the clear structure revealed through PowerPoint in front of them, it might be more difficult for them to learn this language point. With the help of the visual structure of the phrase, I felt students could learn the root of the structure clearly and the rules in Chinese.

6.4.3 Phrase-pattern-based self-scaffolding

Phrase-pattern-based self-scaffolding refers to learners’ internalizing the structure of a phrase to scaffold their own learning. The four pieces of evidence below contain the information on the transfer into self-scaffolding from my phrase-pattern-based scaffolding (see more evidence in Appendix 15).

I can learn because you taught us the numbers first and because you compared Chinese to English. I learnt “money” easily because of the chart and the words “quie” (see Figure 6.6 in 6.4.1). I enjoy the way you teach us. (F/Y5)

I learned dollars by saying the number and the “quie”. And when I write, it helps me remember. (F/Y5)

I learnt dollars and cents. The way I learnt this is because you taught. (F/Y5)

I learnt “money” easily because of the chart and the words “quie”. It is also amazing how you link other words with big things to teach things to teach us. I enjoy the way you teach us. (F/Y5)

Comparison between English and Chinese provided the visual structure to aid students’
self-scaffolding. Maggiolo (2012, p. 42) contends that language learners’ understanding of the target language means integrating “new information into pre-existing structures”. This means it was important for me to use what my students already know and to connect it to the new understanding. In terms of money, the comparison between the structure of the English phrase and Chinese phrase helped students know what parts they should pay attention to. Because the visual phrase in Chinese shows a degree of cohesiveness, this helped the students’ knowledge formulation.

Now I will examine evidence of the third type of pattern-based scaffolding, namely sentence-pattern-based scaffolding.

### 6.5 Sentence-pattern-based scaffolding

The focus of this section is on my effort at sentence-pattern-based scaffolding and the ways I related it to students’ self-scaffolding. The evidence is from my lesson plan, teaching/learning materials, reflection journal and students’ feedback.

#### 6.5.1 Visualization of root-words

In order to analyse the effect of root-words in sentence-pattern-based scaffolding, Table 6.4 is used as evidence to explore this question.

**Table 6.4: Lesson plan for doing translation**

<table>
<thead>
<tr>
<th>Topic: learning to say “money” in Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson aim</strong></td>
</tr>
<tr>
<td>Students can do translation (like they can say “今天星期三”, “昨天星期二”, “明天星期四” : Today is Wednesday; Yesterday was Tuesday; Tomorrow will be Thursday”)</td>
</tr>
<tr>
<td><strong>Students’ level</strong></td>
</tr>
<tr>
<td>Already know how to say “星期一” (Monday) to “星期日” (Sunday)</td>
</tr>
<tr>
<td><strong>Lesson outline</strong></td>
</tr>
<tr>
<td>Review “星期一”(Monday) to “星期日” (Sunday)</td>
</tr>
<tr>
<td>Teaching key language points (root-words in Chinese; the characteristics of Chinese grammar)</td>
</tr>
</tbody>
</table>
Teach students to do translation
Practise doing translation

**Key points for teaching**

- Teach the root-words “天” (heaven; sky; date) with different perspectives, including pronunciation, with visual attributes:
  1) teach the pronunciation of “天” (heaven; sky; date) (see Figure 6.7)
  2) teach the writing of “天” (heaven; sky; date)
  3) teach the culture of “天” (heaven; sky; date) with comparing 天坛 (tiān tán: the Temple of Heaven in Beijing) and 南天寺 (nán tiān sì: the Nan Tian Temple in Wollongong, Australia) (see Figure 6.8)

- Use visual attributes to teach “昨天” (zuó tiān: yesterday), “今天” (jīn tiān: today), “明天” (míng tiān: tomorrow) (see Figure 6.9)

- Use visual attributes to teach translation (like “今天星期三”, “昨天星期二”, “明天星期四”: Today is Wednesday; Yesterday was Tuesday; Tomorrow will be Thursday”) (see Figure 6.10)

<table>
<thead>
<tr>
<th><strong>Scaffolding strategy</strong></th>
<th>Questioning; explaining; hints;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>PowerPoint</td>
</tr>
</tbody>
</table>

**Table 6.5: The comparison between English and Chinese in terms of date**

<table>
<thead>
<tr>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yesterday</td>
<td>昨天</td>
</tr>
<tr>
<td>Today</td>
<td>今天</td>
</tr>
<tr>
<td>Tomorrow</td>
<td>明天</td>
</tr>
</tbody>
</table>

The aim of my lesson was to teach my students to translate the date between English and Chinese. Among the language points, the root-words “天” (heaven; sky; date) are important because students have learnt how to say “星期一” (Monday) to “星期日” (Sunday). Consequently, this lesson was planned to start with teaching root-words “天” (heaven; sky; date) (see Figure 6.7). The level of complexity ranges from the pronunciation, through the meaning of the characters to the cultural aspects integrated into these words. In my expectation, the students could learn “天” (heaven; sky; date) because to me it looks like a person who stretches his arms and legs under the sky (the line at the top of the character). The cultural issues were explained with reference to the
天坛（tiān tán: the Temple of Heaven in Beijing）and 南天寺（nán tiān sì: the Nan Tian Temple in Wollongong, Australia）(see Figure 6.8). This was meant to show Chinese people’s admiration for the sky. Figure 6.9 was provided to guide students to find the pattern. The Figure 6.10 was used to teach students to say “昨天”，“今天”，“明天” (yesterday; today; tomorrow). In this way, the root-words were explained from different perspectives and to further students’ learning.

Figure 6.7: The PowerPoint slide about key word “天” (heaven; sky; date)

Figure 6.8: The PowerPoint slide about culture teaching related to “天”(heaven; sky; date)

<table>
<thead>
<tr>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yesterday</td>
<td>昨天</td>
</tr>
<tr>
<td>Today</td>
<td>今天</td>
</tr>
<tr>
<td>tomorrow</td>
<td>明天</td>
</tr>
</tbody>
</table>

Figure 6.9: The PowerPoint slide about day pattern
The evidence above indicates that I focused on teaching root-words through sentence-pattern-scaffolding. Chen (2009, p. 71) is of a similar view that “汉语在构词上以词根复合法为主，词根加词根就能构成一个词，且词义与构词的语素义密切相关，便于理解并掌握词的意义” (“The main way of creating Chinese words is the combination of root-words. To some extent, one root-word plus one root-word composes a Chinese word. The meaning of the word has a close relationship with the etyma, so it is easy to understand and master the meaning of a Chinese word”). My focus on root-words was driven by the following assumptions:

1) It might be an easy step for a teacher of Chinese to start the lesson and reduce students’ burden in learning. The root-words are small language units and so may be easy for students to learn. For example, “天” (heaven; sky; date) is a root-word which I assumed would be easy for my students to learn.

2) It might provide my students with various ways to understand it, ranging from the meaning of the character, the pronunciation and the culture while also maximising the learning efficiency. Shatz and Wilkinson (2013, p. 127) hold a similar position: “the teachers should modify their materials” and “build language and culturally relevant elements into lessons for all students whenever possible”. In this lesson, I covered different elements, so students could be able to learn “天” from various perspectives.

3) It might lay a good foundation for students to learn further content. In this lesson, if students could learn “天”, then they might have the confidence and eagerness to
find the same pattern in “昨天” (yesterday), “今天” (today), “明天” (tomorrow) and learn the pronunciations (see Figure 6.10) in a short time.

4) It might cultivate good learning habits in the students. During subsequent learning, they might look for root-words and learn them in various ways.

6.5.2 Sentence-pattern-based scaffolding in action

This section analyses my practice of the sentence-pattern-based scaffolding in action. The evidence is from my reflection journal.

The students could say the words of “昨天” (yesterday), “今天” (today), “明天” (tomorrow) fluently and correctly, I began to teach translation. Before I gave an explanation, I showed them the PowerPoint of Figure 6.11. In my prediction, the students observed the colour of the characters carefully and found some regular patterns (they could recognize the characters of week). They said excitedly, “Ms Zhou, same pattern again!” I pretended to be confused and asked: “where is the same pattern? I cannot find it.” One student answered confidently, “In Chinese, the red part and green part can be combined together in the same way; the words like ‘was’, ‘is’, ‘will be’ in English are missing. There is no tense in Chinese.” That was the answer I was waiting for. During practice, they could do translation correctly (for example, if I said “Yesterday was Monday”, they would answer “昨天星期一”). Then their classroom teacher said sentences in English, and they translated them to Chinese fluently. It seemed that this scaffolding really worked. (8 May 2013)

Figure 6.11: The PowerPoint slide for teaching translation

The clear and of consistent presentation of the visual attributes of Han zi (see Figure
6.11) is necessary to scaffold learning of Chinese, because it focuses on the key characteristics of Chinese. Chen (2009, p. 71) claims that “汉语缺乏性数格等形态变化, 可以直接运用词语表达, 不必考虑性数格等的形态变化, 无须顾及性数格等的前后一致性” (“Chinese lack change in gender, number and case in morphology, which makes it possible to use words directly to express completed meaning without taking the change of morphology and consistency of them into consideration”). I assumed this could be beneficial for beginning language learners to generate new sentences. For instance, in Figure 6.11, the visual combination of several noun words can make a sentence without worrying about the problems of tense or grammar. I hoped that this kind of sentence would be easy for my students to learn and to be understood. To me, the visual features of Hanzi makes the structure of grammar systematically and expresses this point consistently and clearly. This might reduce students’ burden by building their confidence to learn aspects of Chinese by themselves. Moreover, I assumed that this might also be beneficial for students’ further learning. Chen (2009, p. 71) claims that “[汉语]语法结构简明, 且句子、短语和词的结构关系具有很强的一致性, 一种规则, 可以三处使用, 外国学生只要记忆同一套规则就能识别或生成不同的词、短语和句子” (“Chinese grammar sometimes is easy because of its consistency in the structure of sentence, phrases or words. It can be generate new sentences with the same pattern. It is possible for foreign students to remember one pattern and recognize various sentences, phrases or words”). Thus, once students have learned one sentence pattern with visual attributes, students might be able to generate new sentences more easily. I assumed that this strategy might reduce the effort for my students of learning Chinese.

6.5.3 Sentence-pattern-based self-scaffolding

Sentence-pattern-based self-scaffolding is defined as the process whereby I taught my students to internalize the visual structure of a sentence to scaffold their learning. The three pieces of evidence from students’ feedback contain the information on the transfer into self-scaffolding from my sentence-pattern-based scaffolding (see more
I know how to say tomorrow and today and yesterday. I learned that in Chinese small words. I also know that to say “days” we put “sing chee” then the number of what day it is. (F/Y5)

Today, yesterday and tomorrow is also easy because the end is “tian” and the start is easy to remember. (F/Y4)

The way she teaches us is cool because she uses the Chinese words and we write it in English and I love to learn about weeks and days and I learnt it by listening very hard and by doing what she says. She is very funny and nice. She teaches us we learn a lot more because she makes PowerPoint and tables to help us understand. (F/Y6)

This evidence demonstrates the effects of my teaching root-words on students’ learning and the impact it had on their self-scaffolding. It seems that root-words provided my students with an opportunity to learn these from different perspectives. They started learning from small words. Teaching them to listen carefully and to make notes were important steps for them to internalize this knowledge. The students engaged in learning Chinese, in part due to their sense of achievement in learning and using Chinese as well as their positive attitude towards their Chinese teacher. These factors seem useful for promoting students’ self-scaffolding.

6.6 Evaluation of pattern-based scaffolding

This section analyses evidence which assesses my efforts at pattern-based scaffolding. The evidence comes from my students, classroom teachers and myself as a teacher-researcher. The evidence is from students’ questionnaires and written feedback, interviews with classroom teachers and my adapted analytical framework.

6.6.1 Students’ evaluation of pattern-based scaffolding

This section analyses evidence of the evaluation made by the students on pattern-based
scaffolding. It analyses students’ questionnaires and feedback. Table 6.6 presents the outcome of questionnaires from 55 students. There were 15 Year 4 students, 20 Year 5 and 20 Year 6 students respectively, who completed the questionnaires.

Table 6.6: The evaluation of pattern-based scaffolding from questionnaires

<table>
<thead>
<tr>
<th>Question 1 (for morpheme-p-b sca)</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you think it is easy for you to learn “week” with learning “sing chee” first:</td>
<td>Very easy</td>
<td>40% (6)</td>
<td>70% (14)</td>
<td>65% (13)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>46.7% (7)</td>
<td>20% (4)</td>
<td>30% (6)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>13.3% (2)</td>
<td>10% (2)</td>
<td>5% (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 2 (for phrase-p-b sca)</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you think it is easy for you to learn “money” with learning “quie” (dollar, cents) first:</td>
<td>Very easy</td>
<td>46.7% (7)</td>
<td>75% (15)</td>
<td>60% (12)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>40% (6)</td>
<td>20% (4)</td>
<td>25% (5)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>13.3% (2)</td>
<td>5% (1)</td>
<td>15% (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 3 (for sentence-p-b sca)</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much easy to learn “yesterday”, “today” and “tomorrow” with learning “tian” (sky; heaven; day) first</td>
<td>Very easy</td>
<td>40% (6)</td>
<td>70% (14)</td>
<td>50% (10)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>40% (6)</td>
<td>20% (4)</td>
<td>35% (7)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>20% (3)</td>
<td>10% (2)</td>
<td>15% (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 4 (for sentence-p-b sca)</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much easy to translate “Yesterday was …”, “Today is …”, “Tomorrow will be…”to Chinese with comparing the sentence in English and Chinese:</td>
<td>Very easy</td>
<td>33.3% (5)</td>
<td>50% (10)</td>
<td>30% (6)</td>
</tr>
<tr>
<td></td>
<td>Easy</td>
<td>40% (6)</td>
<td>45% (9)</td>
<td>50% (10)</td>
</tr>
<tr>
<td></td>
<td>Not easy</td>
<td>26.7% (3)</td>
<td>5% (1)</td>
<td>20% (4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question 5 (for pattern-based sca)</th>
<th>Degree</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you think learning key pattern is a good way for you to learn Chinese:</td>
<td>Strongest</td>
<td>53.3% (8)</td>
<td>80% (16)</td>
<td>75% (15)</td>
</tr>
<tr>
<td></td>
<td>Stronger</td>
<td>33.3% (5)</td>
<td>5% (1)</td>
<td>15% (3)</td>
</tr>
<tr>
<td></td>
<td>strong</td>
<td>13.3% (2)</td>
<td>15% (3)</td>
<td>10% (2)</td>
</tr>
</tbody>
</table>

Notes: “morpheme-p-b sca” means morpheme-pattern-based scaffolding; “phrase-p-b sca” means phrase-pattern-based scaffolding; “sentence-p-b sca” means sentence-pattern based scaffolding; “pattern-based sca” means pattern-based scaffolding

Table 6.6 shows that Year 5 students gave the most positive evaluation for the three types of pattern-based scaffolding. At the same time, they also expressed the highest desire (80%) to continue learning Chinese by means of pattern-based scaffolding.

Compared with the Year 5 students, the Year 4 students seemed to think pattern-based
scaffolding did not help some of them in making Chinese learnable for them. Among the Year 4 students, “not easy” in question 1 to question 4 were 13.3%, 13.3%, 20% and 26.7%.

I expected that the Year 6 students would have thought pattern-based scaffolding more helpful in making Chinese learnable rather than Year 5 because they have a higher language level and stronger learning ability. However, the figures from Year 6 were not as positive as Year 5 students. This might be due to their attitude towards learning, as, being at the highest level in the school; they may pay less attention to lessons than Year 5 students.

However, the figure for the most important question concerns the students’ desire to continue learning Chinese. The majority of the students have a strong desire to learn Chinese via pattern-based scaffolding, ranging from 53.3%, 80% and 75% respectively for Year 4, Year 5 and Year 6 students.

It is worth analysing the reasons why the majority of students have a strong desire to learn Chinese via pattern-based scaffolding. The following feedback was elicited from students (see more evidence in Appendix 15).

Table 6.7: Feedback about pattern-based scaffolding from students

<table>
<thead>
<tr>
<th>Key words</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory-benefit</td>
<td>I think learning in Chinese with a table is much better because I have a bad mind in remembering and you put up the table and it instantly comes back to my mind. (M/Y5)</td>
</tr>
<tr>
<td>Learnable morpheme/root-words</td>
<td>Today, yesterday and tomorrow is also easy because the end is “tian” and the start is easy to remember. (F/Y4)</td>
</tr>
<tr>
<td>High efficiency</td>
<td>I learnt Chinese with Miss Zhou. She taught us money on a chart. She makes us learn it quickly and in a fun way. (M/Y6)</td>
</tr>
<tr>
<td></td>
<td>In Chinese, it is very easy to learn because you teach it very easy and very simply and that is you are a good teacher. (M/Y4)</td>
</tr>
<tr>
<td></td>
<td>It is easy to learn Chinese with you because you make it easy.</td>
</tr>
</tbody>
</table>
In analysing the students’ feedback in Table 6.7, several factors that seem to have influenced their desire to learn Chinese via pattern-based scaffolding are revealed, namely: memory-benefit, high efficiency, learnable morpheme/root-words and useful teaching strategy. The morpheme/root-words are important in visualization of structure. Malyanov, Auriol and Lee (2013, p. 223) point out that “humans cognitively formulate knowledge based on the visualizations”. As my student mentioned in Table 6.7, “you put up the table and it instantly comes back to my mind”. This might be a reason why visualization benefited my student’s memory of Chinese. The advantage of visualization in “promoting and facilitating maximal knowledge formulation” (Malyanov, Auriol & Lee, 2013, p. 223) also supports highly efficient learning. So my student wrote “makes us learn it quickly an in a fun way”. It is obvious that high efficiency is closely related to learnable morpheme/root-words. It means that once these words have been learned, they become the students’ known knowledge. Ferguson (2012, p. 275) notes that “successful scaffolding relies on the teacher being able to bridge the students’ current known understanding with understanding that is not yet known”. This can “help them discover the relation between what is already known and what is to be learned” (Shatz & Wilkinson, 2013, pp. 13-14). Maybe my practice of pattern-based scaffolding catered to this aspect of students’ learning strategies, so they thought my teaching of Chinese was productive and rewarding.

6.6.2 Classroom teachers’ evaluation of pattern-based scaffolding

This section analyses the interviews with classroom teachers (n = 6) for the evaluation of my pattern-based scaffolding. Table 6.8 summarises the classroom teachers’
Table 6.8: Classroom teachers’ evaluation of pattern-based scaffolding

<table>
<thead>
<tr>
<th>Key words</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concise link</td>
<td>Scaffolding provides students with an opportunity to link content. It is a clear way of demonstrating “new” content. This linking of key words allows students to relate “new” knowledge with “known” knowledge. The teaching of content allows students to know what the lesson will be about. (Teacher M)</td>
</tr>
<tr>
<td>Clear logic</td>
<td>It makes sense and will lead the children through the activities in a logical way. It will support the children in their learning. It is logical and well connected. It will help the children remember. Children should be able to link the information. It should make logical sense to them. Each step should build on learning which has already taken place. (Teacher E)</td>
</tr>
<tr>
<td>Visually appealing</td>
<td>Children could visually see where the lessons overcome. Using language with verbal cues allows students to follow the lesson plan. (Teacher G)</td>
</tr>
<tr>
<td>Manageable content &amp;</td>
<td>The scaffolding was excellent for the students. The content was broken down effectively and allowed the students to recognize the patterns and then use the patterns to build their knowledge. It was really good as the students were able to combine the words and numbers really well. If it was taught altogether it may have been confusing or be hard to remember. (Teacher N)</td>
</tr>
<tr>
<td>Knowledge building</td>
<td></td>
</tr>
<tr>
<td>Meta-language development</td>
<td>Very good as it gave more knowledge about Chinese culture as well. It gave more knowledge of the meta-language and the meaning of the words and how they can change in order to change the meaning and function of the base words. Teaching is all about building upon prior knowledge, start out small and simple. Each week get harder and more complicated to build knowledge and deep understanding. (Teacher O)</td>
</tr>
</tbody>
</table>

The evidence in Table 6.8 shows the learners saw the advantages in my pattern-based scaffolding.

The clear structure linking my students’ known knowledge with the unknown
knowledge to be learned was demonstrated clearly. Shatz and Wilkinson (2013, p. 14) observe that “teachers need to scaffold for their students, by expanding on their partial or incomplete knowledge and by showing how it may be similar to or different from what is to be learned”. Patterns can show the similarities and differences clearly. The relationship of new knowledge and known knowledge is also clear, thereby helping students know what level they have arrived at and where they need to go.

The pattern of transfer helped to show my students clear logical connections. Shatz and Wilkinson (2013, p. 14) also state that it is important for students to “adapt to new rules of use for newly acquired knowledge” in a clear and organized way.

My clear pattern structure helped my students make “the units maintained in short-term visual memory” (Wheeler & Treisman, 2002, p. 49). It helped my students know the process of the lesson itself, and also helped them quickly remember the new knowledge. This helped me lay a good foundation for their further learning. Once the students learnt the knowledge quickly at the beginning, they could improve more quickly after various forms of practice.

My pattern-based scaffolding entailed a gradual process to help my students combine their known knowledge and unknown knowledge. My pattern-based scaffolding “cut” the knowledge of Chinese into manageable pieces, that is, learnable language units, by starting with small chunks of knowledge, like key words. Then I provided a recognized pattern to my students for building the known knowledge and unknown knowledge. Shatz and Wilkinson (2013, p. 12) recommend that teachers “develop a child's use of partial knowledge or skill in an area so as to acquire more, or to use knowledge from one area to help master another”. Pattern-based scaffolding is an important tool to achieve this goal.

The pattern-based scaffolding I used made structures clear to my students, including the meaning of words, the function of base words and the ways to use them. This
pattern-based scaffolding helped my students remember Chinese, and also benefited their cognitive and meta-language development. Johnson (2009, p. 23) states that this “allows the learners to appropriate and internalize the cognitive functioning that will eventually lead to internalization or the ability to complete the task autonomously and automatically”. The experience of building knowledge also can “influence language and cognitive development” (Shatz & Wilkinson, 2013, p. 13). Once students internalize the pattern-based scaffolding they seem to know how to use the language and develop the ability to go further.

### 6.6.3 My self-evaluation of pattern-based scaffolding

Table 6.9 present my self-evaluation of my effort at pattern-based scaffolding. The framework is adapted from Maggioli (2012) which was used to analyse my scaffolding.

#### Table 6.9: My self-evaluation of pattern-based scaffolding

<table>
<thead>
<tr>
<th>Scaffolding function</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A higher degree</td>
<td>Considerable degree of</td>
<td>Some effectiveness</td>
<td>Limited effectiveness</td>
</tr>
<tr>
<td></td>
<td>of effectiveness</td>
<td>effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of degrees of freedom</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction maintenance</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marking critical features</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frustration control</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Demonstration</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are several reasons for high levels of self-marking in Table 6.9.

Recruitment—that is, engaging the learner—was effective through pattern-based
scaffolding. It focused on comparing Chinese and English. The teaching content was carefully chosen by me for the purpose of making students feel as comfortable about learning Chinese as English.

Reduction of the degrees of freedom—that is, developing the task around manageable components, had a higher degree of effectiveness. Pattern-based scaffolding focused guiding my students’ attention to the visual structure of Chinese words, phrases and sentences. My aim was to have them find the same pattern rather than boring academic linguistic knowledge of Chinese. I simplified the contents to help my students to absorb this new knowledge quickly. What’s more, it enhanced my students’ ability to say Chinese easily.

Direction maintenance—that is, ensuring the learner is on task, served as Considerable degree of effectiveness. In pattern-based scaffolding, the morphemes and root-words were explained in detail. At the same time, different perspectives or explanations were provided to attract my students’ attention and keep them engaged in learning Chinese. The patterns provided a logical way to promote my students’ cognitive development through learning Chinese.

Marking the critical features of Chinese—that is, highlighting the crucial aspects of a task, was a higher degree of effectiveness. My approach to pattern-based scaffolding took advantage of visual attributes and made these structures clear for my students. They grabbed key words and key structures in an easy and efficient way. The comparison between Chinese and English helped my students bridge what they had known with what they wanted to learn.

Frustration control—that is, reducing the frustration level of a task, had some effectiveness. My strategies helped my students build their confidence. But their immediate performance did not reflect whether they had absorbed it. They needed time to rehearse what they had learned, and I needed different ways to check their learning.
The best way to know this was through my students’ feedback.

Demonstration or modelling—that is, providing students with possible ways of reaching a solution, had a higher degree of effectiveness. The pattern was taught before students were provided with fruitful examples to practice. I achieved this goal through various ways. For example, the teaching of “天” (heaven; sky; date) ranged from the meaning of the character, the pronunciation and the culture to help my students understand this knowledge better.

6.7 Conclusion

This chapter explored the three types of pattern-based scaffolding by analysing the use of them through displaying some lessons. The main discussion in this chapter is about the specific steps of using pattern-based scaffolding and the interaction with students’ self-scaffolding. The evaluations from the students and classroom teachers and myself illustrate that pattern-based scaffolding is an appropriate scaffolding to build students’ knowledge in a limited time and in an easy way.
Chapter 7: Conclusion

7.1 Introduction

This chapter reviews the preceding Chapters 1 to 6, summarizing the research as a whole and emphasizes the primary focuses. It discusses key findings, the main research outcomes from this study and how it addresses gaps in the literature. In particular it looks at the implications of scaffolding, providing some advisory directions and specific teaching strategies derived from and inspired by the teacher-researcher’s teaching experience in Australia. Recommendations for further study point out potential research fields related to scaffolding.

7.2 Summary of this study

Chapter 1 briefly introduced the research project, explaining the interrelationship between the questions, the research processes and my educational experiences. The significance of this research was indicated, together with a statement of the thesis as argued through the ensuing chapters.

Chapter 2, in a review of the research literature, covered various matters: the problems teachers have, teachers’ knowledge, the characteristics of second language learners, the Zone of Proximal Development (ZPD), and taking advantage of scaffolding to stimulate language learning. The challenge of making Chinese learnable inspired me to focus on the characteristics of beginning language learners, on students’ prior sociolinguistic knowledge, and on the use of linguistic similarities between Chinese and English to engage students. Chapter 2 reviewed the literature on scaffolding from different perspectives, including characteristics, function, types and assisted performance.
Chapter 3 explained the methodology employed in this study. Self-study narrative inquiry was used to explore answers to the research questions about scaffolding. An overview of the research design provided an account of the structure and sequence of this research. Interviews, document collection, reflection journal and questionnaires were used to collect data. Coding, content analysis and concept mapping were used as the tools of data analysis, to enhance this study’s credibility and reliability.

Chapter 4, the first evidentiary chapter, focused on how to take advantage of Kindergarten to Year 3 students’ knowledge of music to make Chinese learnable. The analysis in this chapter covered four themes. First, it discussed the reasons for using music as a scaffold. Second, it explored the reasons why behavioural engagement might assist students’ performance of Chinese. An analysis of the evidence from a completed lesson using music-based scaffolding, showed the specific teaching and learning steps involved in successful application of scaffolding principles. An evaluation from the perspectives of teachers’ interviews, students’ questionnaires and my own self-evaluation, suggests that music-based scaffolding may be useful for teaching young students Chinese.

Chapter 5, the second evidentiary chapter, aimed to find out how to take advantage of sociolinguistic-activity-based scaffolding to make Chinese learnable. The school tuck-shop was chosen as an opportunity to test this scaffolding strategy. An analysis of the process of scaffolding showed the specific steps used to help students prepare for this sociolinguistic activity. When it came to students buying food at the tuck-shop in Chinese, two further kinds of scaffolding made this possible, namely: scaffolding provided by the tuck-shop attendant and the students’ own self-scaffolding. With the latter, vivid pictures were provided of how students developed their own self-scaffolding, what difficulties they faced, how they overcame them, and their feelings about using Chinese in sociolinguistic activities. Data from my reflection journal, from students’ feedback, from interviews with a tuck-shop attendant and a
classroom teacher, and from the teaching/learning material, illustrated that sociolinguistic-activity-based scaffolding may be helpful in taking advantage of students’ recurrent everyday sociolinguistic activities to make Chinese learnable.

Chapter 6, the final evidentiary chapter, analysed the evidence of pattern-based scaffolding. This consisted of three types, namely: morpheme-pattern-based scaffolding, phrase-pattern-based scaffolding and sentence-pattern-based scaffolding. Analysis of my reflection journal and teaching/learning materials showed how to use what students already know to help them learn through pattern-based scaffolding. The evidence of students’ feedback showed possibilities for transferring from teacher-driven pattern-based scaffolding to students’ self-scaffolding. The evaluations of the classroom teachers, the students and myself, supported the idea that pattern-based scaffolding could be an appropriate tool to promote students’ cognitive development and learning of Chinese.

7.3 Key findings

**Contributory research question 1:** How can Kindergarten to Year 3 students’ knowledge of music be used to scaffold their learning of Chinese? (Chapter 4)

First, songs that are known to students in English are a reasonable activity to use to scaffold learning of Chinese. Rebuschat and others (2012) claim that similar cognitive processes and the use of shared neural sources in the brain make interaction between music and language learning possible. My own finding was that songs known to the students provide a memory trigger (see 4.2.2). At the same time, students’ interest in music and their ability to internalize language with music can promote their conscious cognition of Chinese (see 4.5.2). Further, music is a good tool to help students overcome timidity (see 4.2.2).

Second, behavioural engagement in music-based scaffolding is also good for students’
cognitive and affective development, with respect to learning Chinese. Hargreaves, Miell and Macdonald (2012) claim that there is an interaction between the visual and auditory modes of gaining knowledge. My finding was that behavioural engagement promotes students’ multi-sensory learning by providing a connection to their memories (see 4.3.1). This seems to enrich students’ ways of learning Chinese and provide for the development of their cognitive and affective domains. Additionally, a positive attitude towards learning Chinese stimulated the students’ comprehension of what they were learning (see 4.5.2).

Third, music-based scaffolding benefited students’ language learning. A song was purposefully chosen because the students knew the words in English; this minimized the challenge of learning the new content (see 4.5.2). Because of the prosodic structure of songs, this provided language-specific exemplars of Chinese vocabularies and sentence structures (Rebuschat, Martin & Hawkins, 2012). Checking students’ prior knowledge, giving explicit instructions in this song in English, and using group work, were important strategies in music-based scaffolding (see 4.5.2). Musical performance was a meaningful way to cultivate students’ confidence in developing a better understanding of Chinese. It enhanced their sense of achievement and confidence, and also laid a good foundation for the further learning of Chinese (see 4.5.2). Teachers can build on student’s knowledge of the music and add the new words in Chinese. To sum up, this music-based scaffolding is a detailed and concise process, which means students’ learning through increasing levels of complexity.

**Contributory research question 2:** How can scaffolding be used to take advantage of students’ recurrent everyday sociolinguistic activities in English to make Chinese learnable? (Chapter 5)

There were two strategies that made it possible for students to learn Chinese through recurrent sociolinguistic activities.

The first strategy was to learn about students’ recurrent everyday sociolinguistic
activities. Once this was known, an appropriate teaching/learning context, and Chinese content, could be chosen. The main strategy was to bridge the phonemic similarities between the English they already knew and the new Chinese to be learnt. This meant choosing learnable units of language (Singh, 2013) to teach, and doing simulations to rehearse the use of Chinese prior to engaging in the sociolinguistic activity. Mascolo (2005) argues that language similarities help bridge the gap between students’ prior knowledge and the knowledge they have to learn. My findings indicate that bridging the phonemic similarities between English and Chinese promoted the students’ internalization of Chinese (see 5.3.2).

Tutner and Berkowitz (2005) advise that reducing the complexities of what students have to learn is the key feature of scaffolding. My findings indicate that learnable units of language have to be student-centred, to give students the ability to learn Chinese. Focusing on learnable units of language is a strategy that breaks down a complicated task into learnable blocks that can be built on over time, to expand students’ learning of the language. Richards and Szilas (2012) found that simulations can develop and test students’ knowledge. Simulations are good for students to practise Chinese and become familiar with the specific steps to be used in sociolinguistic activities; thereby enhancing their confidence and their awareness of likely problems (see 5.3.4).

The second strategy was to have students practise real world sociolinguistic activities. There are three sources that students can use to achieve their goal of using Chinese in sociolinguistic activities, namely: their teachers, supportive people engaged in the sociolinguistic activities, and their own self-scaffolding capabilities. Following up students’ practice of Chinese in sociolinguistic activities is necessary, to find out about the problems they face. Then teachers can further divide the tasks into smaller, learnable language units so the students can practise their Chinese. Providing corrective and positive feedback enhances students’ confidence and helps them to solve their own problems. Teachers of Chinese who find supportive people in the school will get useful help for the students. Third, students’ self-scaffolding plays a vital role in their learning.
of Chinese. Observing, recalling, identifying, vocalizing and applying are important self-scaffolding strategies for all students to learn and develop, especially so as to control their negative emotions. Some negative factors that can hinder sociolinguistic-activity-based scaffolding and students’ self-scaffolding, apart from negative emotions, include a low level of learning of Chinese, lack of family support and inappropriate teaching/learning resources.

**Contributory research question 3:** Why can visual patterns in Chinese be used to scaffold students’ learning of Chinese? (Chapter 6)

Chen (2009) argues that consistency in the structure of words and sentences in Chinese make it easier for students to learn. My findings suggest that discernible regularities in the visual attributes of Han zi (Chinese characters) can be used to make Chinese learnable (see 6.3.2, 6.4.2 and 6.5.2). Also, there is a close relationship between morphemes and root words and sounds and meanings in Chinese.

Pattern-based scaffolding seems to have several advantages in making Chinese learnable (see 6.3.2, 6.4.2, 6.5.2 and 6.6.2). The visual attributes of Han zi can be used to reduce the burden of learning by separating the content into manageable tasks for students. The links of morphemes and root-words, and the logic of how these work, can be used to build patterns that help students to learn Chinese (see 6.5.2 and 6.6.2). Pattern-based scaffolding makes Chinese learnable by promoting meta-language awareness (see 6.6.2).

Students’ development of a consciousness of their own self-scaffolding is also important for learning Chinese (see 6.3.3, 6.4.3 and 6.5.3). The students used self-scaffolding to assert themselves in learning Chinese. This helped them learn to generate new words, phrases and sentences in Chinese themselves. It reflects the function of “事半功倍” (shì bàn gōng bèi): that is, getting twice the result for half the effort.
**Main research question:** What kinds of scaffolding might be used in teaching for L1 to L2 transfer in order to make Chinese learnable for English speaking school students?

Scaffolding is a key strategy in education. The processes of teaching/learning cannot proceed successfully without it. Thus, finding useful and reasonable scaffolding opportunities in teaching for L1/L2 transfer, from what students know in English to what they need to learn in Chinese, is important. In this study, music, sociolinguistic activities and patterns were used to scaffold the teaching/learning of Chinese. These strategies helped students to internalize their knowledge of the Chinese they learned, but also reduced the cost or burden of learning the language.

The reasons for using music-based scaffolding are as follows. Students’ knowledge of music can be used to promote their internalization of Chinese and reduce negative feelings of timidity. Music-based scaffolding caters to students’ multi-sensory capabilities for learning. The visual and auditory interaction is beneficial to memorisation, as well as to improved comprehension. Using knowledge students are already familiar with, minimizes the challenges of leaning new content, and also makes it possible to add new words to further their learning. With regard to sociolinguistic-activity-based scaffolding, using phonemic similarities between their English knowledge and perceived similarities in Chinese provides a basis for selecting learnable units of language to teach. Doing simulations helps students internalize Chinese in class. Scaffolding by teachers of Chinese needs to flexibly respond to students’ use of Chinese in sociolinguistic activities. Pattern-based scaffolding is made possible by the visual attributes of Han zi. There is consistency in Chinese words, morphemes and sentence structures, which provides a basis for scaffolding their learning. These characteristic patterns can be used to reduce the burden of learning so as to build students’ knowledge of manageable language units and key words. The logic in the visual patterns in Han zi provides a basis for students to learn by making comparisons across a range of related words. This reduces students’ negative feelings
about learning Chinese and builds their confidence.

To sum up, these three kinds of scaffolding seem to enhance interest, various learning strategies, and cognitive development in students. What’s more, they appear to make Chinese learnable and teachable in English speaking countries.

### 7.4 Implications for making Chinese learnable

Consider the following principles for making Chinese learnable. First, “教学相长” (jiào xué xiāng zhǎng), that is teachers benefit from their own teaching and from students’ learning. This means that teachers should reflect on their own teaching and learn from students’ feedback. Second, “聰时孙摩” (yù shí sūn mó), that is, set expectations of students; set the best time and place for the teaching; teach using scaffolding and follow up students’ learning. The teaching/learning of Chinese need not happen only in the classroom. It should be regarded as a long-term process, and teachers should be patient, guiding students in the right direction and giving them feedback and encouragement. Third, “道而弗牵，强而弗抑，开而弗达” (dào ér fū qīan, qiáng ér fū yì, kāi ér fú dá). Teachers should inspire students, rather than making all decisions for them. Teachers should have high expectations but should not make students upset. Teachers should guide students’ learning of Chinese, rather than holding them back, should encourage rather than suppress them, and guide their learning rather than seeking to achieve quick outcomes for students. Below is a discussion of the implications of these three kinds of scaffolding for making Chinese learnable in English speaking countries.

#### 7.4.1 Implications of using music-based scaffolding

This section is about the implications of using music-based scaffolding in making Chinese learnable. Figure 7.1 is a music-based scaffolding model for making Chinese learnable, which teachers can draw upon and further develop. This model starts before class. It means that teachers need to choose music with a strong and distinct melody and
that is already known to students, so as to use this familiarity to make Chinese learnable for them. In the classroom, the process can be divided into three stages.

In stage 1 (see Figure 7.1), the first step is to check whether the students are familiar with the rhythm of the music. The next step is to have students mimic the singing of the same song in Chinese. This means having the teacher sing to pronounce the words clearly for the students to imitate, thus enhancing their knowledge of the content they are learning in Chinese. Students are encouraged to listen carefully and to pay particular attention to the teacher’s mouth. It is necessary for teachers to observe all students and to get those who are better able to copy the teacher’s singing to provide models for other students.

Stage 2 is informed by four main perspectives on making Chinese learnable. First, paying attention to the language similarities between English and Chinese. Second, explaining the right shape of the mouth, to enhance pronunciation. Third, keeping students on-task without boring them. Fourth, teaching about Chinese cultural similarities and differences, to help students understand the language and to maintain their interest in learning Chinese.

In Stage 3, the first step is to check through observation whether students can say the Chinese sentence without music, getting students to repeat the relevant sentences. Teachers play the song, get the students to sing and ensure clear pronunciation. During this process, the teacher observes students’ performance, to find and reward those students who are on-task and who can provide suitable models for other students. When the majority of the students can sing the song, it is necessary to help them internalize the song, using various ways to practise this. Three ways of doing this are recommended: having a competition, such as boys competing with girls to sing the song, building students’ sense of confidence, getting them to sing to the classroom teachers to get more support, and using the classroom to stage students’ performance for others, to build students’ level of achievement.
Figure 7.1: A model of music-based scaffolding for making Chinese learnable

This section indicates how to interact with young students while using music-based scaffolding.
A number of principles can be derived from my research, for the effective teaching of young students. First, keep smiling all the time. At the start, young students may feel nervous about learning Chinese, so it is important to make them feel relaxed. Also, demonstrate your ability as a teacher to gain the students’ admiration; young students are curious about teachers’ abilities. Teachers of Chinese can show students their abilities in singing, dancing, and drawing pictures. Additionally, be gentle with students who make mistakes. Encourage students to try, and praise them in their presence, if they really do a good job. Praise students for their success and give corrective feedback where they have it wrong.

7.4.2 Implications of using sociolinguistic-activity-based scaffolding

This section explores the implications of sociolinguistic-activity-based scaffolding for making Chinese learnable.

How to bridge phonemic similarities between English and Chinese:

Figure 7.2 illustrates a model for bridging from students’ English to learning Chinese words with phonemic similarities. This scaffolding strategy entails three stages: the before-task, on-task and after-task stages.

At the before-task stage, teachers need to check students’ current level of knowledge. In order to help students clearly understand the way to solve a problem, teachers might provide modelling to students, such as doing an example for students in detail. Such an example might contain learning goals, English rules and Chinese pronunciation, to take advantage of similar pronunciations.

When students are on-task, teachers of Chinese can start with an easy challenge, one that is helpful to build students’ confidence. When teachers say the word or words to
the students, they should do so at an appropriate speed, and with clear pronunciation. At the same time, teachers need to observe students’ engagement, in order to regulate their teaching strategies flexibly. Strategies might include repetitions of words, or pronouncing some syllables more clearly, with greater emphasis and/or the correct stress.

Once the task is finished, in the after-task stage, teachers need to check students’ responses by getting feedback from other students. An efficient way to do so can be to type students’ work on PowerPoint and ask the whole class to say the word. If the response was accurate, the student should get praise from the teacher. If the answer is not accurate, the teacher might give students hints or other bridging assistance to help get them back on-task, through encouragement.

Figure 7.2: The model of using students’ English knowledge to learn Chinese words

This model has several advantages. First, it gets students practising listening for sounds in Chinese that are similar to those in English. This is a new way to teach
students Chinese words. Because of the phonemic similarities, Chinese vocabularies can be read and pronounced by English speakers (see Figure 5.2, the Chinese menu). As they continue to practise, they pay close attention to the teacher’s pronunciation so as to become more familiar with the Chinese vocabulary. Second, this scaffolding is also beneficial to teachers’ professional development. It makes a teacher of Chinese aware of the pronunciation that students tend to use when learning Chinese words. Students’ feedback is a valuable resource for teacher’s professional learning, as well as for knowing how the students are learning. Teachers of Chinese can prevent inappropriate pronunciation by students and thus reduce the cost or burden of learning Chinese. Third, the transfer of authority via scaffolding is made possible through the shift from teacher-centred to student-centred pedagogies. As students master learning Chinese, their sense of achievement promotes their learning efficacy.

**How to do a simulation with scaffolding:**

1) The simulation material should be as realistic as possible.
2) The teacher provides an example first, giving a clear demonstration, and makes known to the students what they are expected to do.
3) The teacher identifies students’ problems and analyses these quickly, giving appropriate corrective feedback to help them.
4) Different forms of encouragement should be used. Never make students feel embarrassed when they have made a mistake. Deal with mistakes in a constructive way.
5) Create a relevant classroom atmosphere to help students feel relaxed.

**How to encourage students to practise Chinese through sociolinguistic activities:**

The encouragement to be given to students includes the following:

1) Follow up students’ practising of Chinese in sociolinguistic activities and find the problems that hinder their performance
2) Praise the proficient learners who practise Chinese in sociolinguistic activities, as
a way of stimulating other students to do likewise.

3) Give reasons for why these students are being praised. Inform other students of the specific steps they can also use, based on the simulation they practised in class. This means that other students who have learned the Chinese can also do it.

4) Let students know that the teacher is keeping an eye on them and will know what they are doing for Chinese practice (for example, the tuck-shop attendant may record their names to let the teacher know).

5) Build the students’ confidence in their performance of Chinese.

6) Cut the tasks into learnable language units and scaffold students practising their Chinese step by step.

7) Making the practice of Chinese special for students by pointing out their abilities and praising their achievement.

8) The teacher explains her/his expectation of them, such as they can do a good job because of their good performance in class.

9) Give students’ specific steps and guidance to do the task, and let them know there is assistance available to help them.

7.4.3 Implications of using pattern-based scaffolding

This section explores the implications of pattern-based scaffolding for making Chinese learnable.

How to guide students to learn Chinese through patterns:

1) Choose appropriate teaching/learning content such as morphemes and root-words. Not all Chinese words, phrases or sentences can be used as the material for pattern-based scaffolding.

2) Guide students to find a similar pattern in the Han zi. Provide students with an explanation that points to relevant similarities between English and Chinese.

3) Explain and teach the morphemes or root words carefully, scaffolding the various complexities involved. These range from pronunciation, the meaning of characters,
and the cultural background.

4) When students have learnt the morphemes or root-words, combine them with other parts of Chinese words (e.g. non-morpheme and no-root-word parts) and show students the similarities between English and Chinese, using tables or charts.

5) Identify those parts where the students make mistakes. Make sure that students know which parts are correct, which parts need to be changed, and why they need to be changed.

6) Provide fruitful examples and give students enough time to find the same patterns, so that they can readily identify them.

How to take advantage of students’ emotional investment to take them further:

First, seize positive moments in teaching to use students’ high motivation to help them learn further. When students are inspired by success, build on their desire to learn Chinese by having them model it for other students. Second, make students aware of their ability to learn through self-scaffolding. Teachers of Chinese can provide opportunities for students to identify their ability in learning Chinese and give them positive feedback to cultivate their sense of achievement.

What is the work of teachers in teaching for L1/L2 transfer?

Four roles are available to the teacher in facilitating L1/L2 transfer:

1) **Guide:** Making Chinese learnable means working with students’ everyday interests, building on their success and giving them a sense of achievement. Teachers are responsible for making Chinese learnable; the problem is that initially they do not know how to do this. The Chinese concept “先入为主” (xiān rù wéi zhǔ), which means that people tend to judge something by the first impression, expresses the limitations of first impressions. Teachers of Chinese need the flexibility to learn how to teach language from the students’ knowledge zone. Good teachers can make Chinese learnable, but they have to reduce this perception of difficulty for beginners.
2) **Participant**: Teaching does not mean standing in front of students and introducing the content while students passively note it. This is the typical teacher-centred style. In Australia, teacher-student relations are very different, more mutually respectful than this style. The teacher acting as active participant reduces the distance between the students and the teacher. More importantly, teachers want to know students’ specific learning patterns, their difficulties and interests, and teachers who have a better understanding of their students are able to teach them better. However, it is necessary for teachers to keep an appropriate balance, in terms of their power or authority.

3) **Magician**: Australian primary school students have considerable curiosity. Teachers can take advantage of this to enhance students’ learning. It is common, and normal, for students to meet difficulties during the learning process. When they are faced with such challenges, their motivation is lower. Teachers need to explain this situation to students, so as to enlighten them. Thus, students may regard the teachers as magicians, someone with the power to make Chinese learnable. It is important for teachers to find the difficulties and bottlenecks that students face. The teachers then use their knowledge of Chinese to perform the “magic” of making Chinese learnable.

4) **Resource**: Teachers are the “carriers” of knowledge of Chinese and can transfer that knowledge to students. A knowledgeable teacher can show the beautiful world of the Chinese language to students and open their intellectual horizons and stimulate their desire to explore that world further. The key intellectual resource in language teaching and learning is a skilful and knowledgeable teacher. Students learn Chinese from such knowledgeable teachers. Consequently, the teachers’ understanding of the Chinese language is the key resource for students’ learning. This resource is dynamic and has to be upgraded frequently.

**7.5 Limitations of this study and recommendations for further research**

Like most research, this study has its limitations, which should be recognised.
First, this study was limited by the selection of participants. That the scaffolding worked during this period of teaching does not mean it will work any and every time. Various elements impact the function of scaffolding. When I analysed the data, this could have been influenced by my prior teaching experience in Chinese and by my ideas about teaching. If the data analysis were done by others, the outcomes could have been different.

Second, each type of scaffolding has its own limitations. One possible limitation is that they all focused on the listening and speaking of Chinese, rather than on reading and writing. There is a need to study how beginners might learn to read and write Chinese, so that they can learn all four skills. When it comes to music-based scaffolding, songs that do not have a strong rhythm, or with which students are not familiar in English, are likely not to be very useful. With regard to sociolinguistic-activity-based scaffolding, the support from others (like the tuck-shop attendant) is required, along with students’ own initiative. Here, it was been used with Year 4 to Year 6 students, but further studies could examine its use with Year 1 to Year 3 students. With the support of other parties such as persons serving at the tuck-shop, it becomes possible for students to follow up their learning with further practice. The problem with sociolinguistic-activity-based scaffolding is that I was not sure how long I should insist on students practising Chinese at the tuck-shop. Pattern-based scaffolding requires that teachers have a sophisticated knowledge of Chinese themselves. Teachers who do not know the characteristics of Chinese very well may face difficulties in using this form of scaffolding. This scaffolding can work well if the terms and activities have close relationships between the English and Chinese, such as the days of the week, dates, money and time. To sum up, scaffolding has a high requirement for skilled teachers with capacities in using a range of teaching/learning strategies.

Third, there were limitations with my data collection. The Australian classroom teachers’ and students’ feedback about my scaffolding was positive. But more evidence
would be needed to establish the credibility of scaffolding in this field more substantially.

This study attempted to find out what forms of scaffolding might be useful for teaching L1/L2 transfer: that is, using what the students know in English, to help them learn Chinese. Evidence of music-based scaffolding, sociolinguistic-activity-based scaffolding and pattern-based scaffolding was analysed in this study. It is recommended that future studies examine how these three modes of scaffolding can be combined with other modes of scaffolding, like peer and instructional scaffolding. At the same time, there is a need for studies of the reasonable and integrated evaluation of students’ learning of Chinese via scaffolding.
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conference held at the university of Sydney.


APPENDICES

Appendix 1: Approval of University Ethics Committee

UWS HUMAN RESEARCH ETHICS COMMITTEE

12 December 2012

Professor Michael Singh,
Centre for Educational Research

Dear Michael,

I wish to formally advise you that the Human Research Ethics Committee has approved your research proposal H9975 - “Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners”, until 31 December 2013 with the provision of a progress report annually and a final report on completion.

Please quote the project number and title as indicated above on all correspondence related to this project.

This protocol covers the following researchers:
Michael Singh, Dacheng Zhao, Jinghe Han, Lan Zhou.

Yours sincerely

Dr Anne Abraham
Chair, UWS Human Research Ethics Committee

m.j.singh@uws.edu.au
17554419@student.uws.edu.au
Appendix 2: State Education Research Approval Process (SERAP) Approval

Ms Lan Zhou
UWS Penrith Residential College
Locked Bag 1797
PENRITH NSW 2751

DOC13/79306
SERAP No: 2012233

Dear Ms Zhou

I refer to your application to conduct in NSW government schools (Western Sydney Region) a research project entitled, Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners.

I am pleased to inform you that your application has been approved and that you may now contact the principals of the nominated schools to seek their participation.

Your approval will remain valid until 1 March 2014

You should include a copy of this letter with the documents you send to the schools.

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

- 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 data 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.

Yours sincerely

Kerrie Ikin
School Education Director, The Hills
Western Sydney Region Education Research Manager
26 February 2013

NSW Department of Education & Communities – Western Sydney Region
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Appendix 3: Participant Information Sheets (Parents/Caregiver)

Participant Information Sheet (Parent/Caregiver)
An information sheet, which is tailored in format and language appropriate for the category of participant - adult, child, young adult, should be developed.

Note: If not all of the text in the row is visible please ‘click your cursor’ anywhere on the page to expand the row. To view guidance on what is required in each section ‘hover your cursor’ over the bold text. Further instructions are on the last page of this form.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners

Who is carrying out the study?
The Chinese teacher Miss Lan Zhou is carrying out this study.

Your child is invited to participate in a study conducted by Chinese teacher Miss Lan Zhou. It will form the basis of the degree of Master of Education (Hons) in the University of Western Sydney. The study is being supervised by Professor Michael Singh and Dr. Jinhe Han.

What is the study about?
The purpose is to investigate what kind of teachers’ knowledge is useful and necessary for teaching Chinese in Australian primary schools and offer different ideas to teacher-researchers about how to use their knowledge to make Chinese learnable.

What does the study involve?
Your child will be invited to do the easy questionnaires. The questionnaires may be 4 to 5 easy questions related to Chinese teaching and learning. They can be finished by ticking off.

How much time will the study take?
Questionnaires will only be done for one or twice in 2013. They will be finished within 5 minutes.

All the materials will be stored in a locked cabinet at CER (College of Education Research) for 5 years, after which they will be destroyed. Accessed by Miss Lan Zhou and her supervisors.

Used in the following ways: analyze what kind of teachers’ knowledge is useful and necessary for teaching Chinese in Australian primary schools. If you have concerns about what have been done, you may access the questionnaires or feedback of your child within the period of storage. These materials can be accesses in the following ways: contact Miss Lan Zhou (telephone: 0403797339; E-mail: 17554419@student.uws.edu.au).
Will the study benefit me?
This study can benefit your child. It helps Miss Lan Zhou have a better understanding of the students’ learning situation and design more appropriate and interesting content for your child. It can make Chinese easier and learnable for them. They can learn a new language and culture in an interesting and easy way.

Will the study have any discomforts?
The study will not cause any discomfort for you or your child. Participation is voluntary. If your child decide not to take part, it will not affect your child’s relationship with the researcher. If your child changes his/her mind about participation after the study has started, she/he can withdraw at any time she/he wants, and any information already collected from your child will be destroyed.

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

Will anyone else know the results? How will the results be disseminated?
No-one will be able to identify your child from the results of the study. Only the researchers and her supervisors will have access to the original data provided by your children with ethical permission. Your children’s written feedback will be on paper. Paper information will be stored in files in a locked cabinet for 5 years, after which they will be shredded. The results may be disseminated through a thesis, short and long SERAP reports, and jointly the authored publications with supervisor’s.

Can I withdraw my child from the study?
Your child’s participation in the study is entirely voluntary: you are not obliged to give consent. Your child may withdraw from the study at any time – or you may withdraw your child from the study at which point all written of your child’s participation will be destroyed.

Can I tell other people about the study?
Yes, you can tell other people about the study by providing them with the chief investigator’s contact details. They can contact the chief investigator to discuss their participation in the research project and obtain an information sheet.

What if I require further information?
When you have read this information, Miss Lan Zhou will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Miss Lan Zhou (telephone: 0403797339; E-mail: 17554419@student.uws.edu.au).

What if I have a complaint?
This study has been approved by the University of Western Sydney Human Research Ethics Committee. The Approval number is H9975

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au.

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

If you agree to participate in this study, you may be asked to sign the Participant Consent Form.
Participant Information Sheet (Parent/Caregiver)

An information sheet, which is tailored in format and language appropriate for the category of participant - adult, child, young adult, should be developed.

Note: If not all of the text in the row is visible please ‘click your cursor’ anywhere on the page to expand the row. To view guidance on what is required in each section ‘hover your cursor’ over the bold text. Further instructions are on the last page of this form.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners

Who is carrying out the study?
The Chinese teacher Miss Lan Zhou is carrying out this study.

Your child is invited to participate in a study conducted by Chinese teacher Miss Lan Zhou. It will form the basis of the degree of Master of Education (Hons) in the University of Western Sydney. The study is being supervised by Professor Michael Singh and Dr. Jinhe Han.

What is the study about?
The purpose is to investigate what kind of teachers’ knowledge is useful and necessary for teaching Chinese in Australian primary schools and offer different ideas to teacher-researchers about how to use their knowledge to make Chinese learnable

What does the study involve?
Your child will be invited to do the easy questionnaires, work sheets or write some feedback. The questionnaires are easy questions related to Chinese teaching and learning. The feedback means their feeling of learning Chinese or their suggestions about Chinese teaching and learning. The feedback can be finished with one or two sentences.

How much time will the study take?
Questionnaires and feedbacks will only be done for one or twice in 2013. They will be finished within 5 minutes. Worksheets are the part of teaching process, such as writing down the key parts on Chinese book for helping you child to remember what has been taught, it depends on your child to write down or not. The worksheets also can be finished within 5 minutes.

All the materials will be stored in a locked cabinet at CER (College of Education Research) for 5 years, after which they will be destroyed. Accessed by Miss Lan Zhou and her supervisors.

Used in the following ways: analyze what kind of teachers’ knowledge is useful and necessary for teaching Chinese in Australian primary schools.

If you have concerns about what have been done, you may access the questionnaires or feedback of your child within the period of storage. These materials can be accesses in the following ways: contact Miss Lan Zhou (telephone: 0403797339; E-mail: 17554419@student.WS.edu.au).
Will the study benefit me?
This study can benefit your child. It helps Miss Lan Zhou have a better understanding of the students' learning situation and design more appropriate and interesting content for your child. It can make Chinese easier and learnable for them. They can learn a new language and culture in an interesting and easy way.

Will the study have any discomforts?
The study will not cause any discomfort for you or your child. Participation is voluntary. If your child decide not to take part, it will not affect your child's relationship with the researcher. If your child changes his/her mind about participation after the study has started, she/he can withdraw at any time she/he wants, and any information already collected from your child will be destroyed.

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

Will anyone else know the results? How will the results be disseminated?
No one will be able to identify your child from the results of the study. Only the researchers and her supervisors will have access to the original data provided by your children with ethical permission. Your children's written feedback will be on paper. Paper information will be stored in files in a locked cabinet for 5 years, after which they will be shredded. The results may be disseminated through a thesis, short and long SERAP reports, and jointly the authored publications with supervisor's.

Can I withdraw my child from the study?
Your child's participation in the study is entirely voluntary: you are not obliged to give consent. Your child may withdraw from the study at any time - or you may withdraw your child from the study at which point all written of your child's participation will be destroyed.

Can I tell other people about the study?
Yes, you can tell other people about the study by providing them with the chief investigator's contact details. They can contact the chief investigator to discuss their participation in the research project and obtain an information sheet.

What if I require further information?
When you have read this information, Miss Lan Zhou will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Miss Lan Zhou (telephone: 0403797339; E-mail: 17554415@student.uws.edu.au).

What if I have a complaint?
This study has been approved by the University of Western Sydney Human Research Ethics Committee. The Approval number is H9975

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au.

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

If you agree to participate in this study, you may be asked to sign the Participant Consent Form.
Appendix 4: Participant Information Sheet (Classroom teachers)

Participant Information Sheet (General)

An information sheet, which is tailored in format and language appropriate for the category of participant - adult, child, young adult, should be developed.

Note: If not all of the text in the row is visible please 'click your cursor' anywhere on the page to expand the row. To view guidance on what is required in each section 'hover your cursor' over the bold text. Further instructions are on the last page of this form.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers' prior and new knowledge in educating Australian second language learners

Who is carrying out the study?
The Chinese teacher Miss Lan Zhou is carrying out this study.

You are invited to participate in a study conducted by Chinese teacher Miss Lan Zhou. It will form the basis of the degree of Master of Education (Hons) in the University of Western Sydney. The study is being supervised by Professor Michael Singh and Dr. Jinhe Han.

What is the study about?
The purpose is to investigate what kind of teachers' prior knowledge and new knowledge are necessary, and what characteristics of Australian primary school students should be understood, for teaching Chinese as foreign language.

What does the study involve?
During the course of normal Chinese lessons, you will be asked to observe the teacher-researcher's teaching practice and students' performance for only one or twice. If necessary, you may be invited to write a observation form when you are observing. You will be interviewed to give your opinion about teacher-researcher's teaching practice one or twice at agreed time. The interviews will be audio-recording. Interview transcripts and written feedback will be used as data in the study with your permission.

How much time will the study take?
Observation will be conducted totally one or twice during term 1-4 during normal Chinese lessons. Interviews will be conducted for one or twice at agreed time within 15 minutes.

Will the study benefit me?
The study will directly or indirectly add to your understanding of issues in the teaching of Chinese language and culture.

Will the study involve any discomfort for me?
The study will not cause any discomfort for the teachers. Participation is voluntary. If you decide not to take part, it will not affect your relationship with the researcher. If you change your mind about
participation after the study has started, you can withdraw any time. Any information already collected from you will be destroyed.

How is this study being paid for?
The study is entirely voluntary. No payment is involved.

Will anyone else know the results? How will the results be disseminated?
No-one will be able to identify you from the results of the study. Only the researchers and her supervisors have access to the original data provided by you with ethical permission. Your written feedback will be on paper and interviews will be on audio-tape. Paper information will be stored in files in a locked cabinet for 5 years, after which they will be shredded; computer file containing audio-taped interviews will require a password for access and be stored for 5 years, after which they will be completely deleted. Results of the study will be disseminated through a thesis, short and long SERAP reports, jointly the authored publications with supervisor/s.

Can I withdraw from the study?
Participation is entirely voluntary: you are not obliged to be involved and -if you do participate - you can withdraw at any time without giving any reason and without any consequences.

Can I tell other people about the study?
Yes, you can tell other people about the study by providing them with the chief investigator’s contact details. They can contact the chief investigator to discuss their participation in the research project and obtain an information sheet.

What if I require further information?
When you have read this information, Miss Lan Zhou will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact: Lan Zhou by calling 0403797339 or via E-mail 17554419@student.UWS.edu.au; Prof Michael Singh by calling (02) 4736 0186 or via E-mail : m.j.singh@uws.edu.au;
Dr Jinhe Han by calling 0422652972 or via E-mail : J.Han@uws.edu.au

What if I have a complaint?
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If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au.

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

If you agree to participate in this study, you may be asked to sign the Participant Consent Form.
Appendix 5: Participant Information Sheet (Tuck-shop attendant)

Participant Information Sheet (General)

An information sheet, which is tailored in format and language appropriate for the category of participant - adult, child, young adult, should be developed.

Note: If not all of the text in the row is visible please 'click your cursor' anywhere on the page to expand the row. To view guidance on what is required in each section 'hover your cursor' over the bold text. Further instructions are on the last page of this form.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners

Who is carrying out the study?
The Chinese teacher Miss Lan Zhou is carrying out this study.

You are invited to participate in a study conducted by Chinese teacher Miss Lan Zhou. It will form the basis of the degree of Master of Education (Hons) in the University of Western Sydney. The study is being supervised by Professor Michael Singh and Dr. Jinhe Han.

What is the study about?
The purpose is to investigate what kind of teachers’ prior knowledge and new knowledge are necessary and what characteristics of Australian primary school students should be understood for teaching Chinese as foreign language.

What does the study involve?
You will be asked to help Miss Zhou record the names of students who practise Chinese in tuck-shop. You will be interviewed to give your opinion about teacher-researcher’s teaching practice one or twice at agreed time. The interviews will be audio-recording. Interview transcripts and written feedback will be used as data in the study with your permission.

How much time will the study take?
Interviews will be conducted for one or twice at agreed time within 15 minutes.

Will the study benefit me?
The study will directly or indirectly add to your understanding of issues in the teaching of Chinese language and culture.

Will the study involve any discomfort for me?
The study will not cause any discomfort for the teachers. Participation is voluntary. If you decide not to take part, it will not affect your relationship with the researcher. If you change your mind about participation after the study has started, you can withdraw any time. Any information already collected from you will be destroyed.
How is this study being paid for?
The study is entirely voluntary. No payment is involved.

Will anyone else know the results? How will the results be disseminated?
No-one will be able to identify you from the results of the study. Only the researchers and her supervisors have access to the original data provided by you with ethical permission. Your written feedback will be on paper and interviews will be on audio-tape. Paper information will be stored in files in a locked cabinet for 5 years, after which they will be shredded; computer file containing audio-taped interviews will require a password for access and be stored for 5 years, after which they will be completely deleted. Results of the study will be disseminated through a thesis, short and long SERAP reports, jointly the authored publications with supervisor's.

Can I withdraw from the study?
Participation is entirely voluntary: you are not obliged to be involved and - if you do participate - you can withdraw at any time without giving any reason and without any consequences.

Can I tell other people about the study?
Yes, you can tell other people about the study by providing them with the chief investigator’s contact details. They can contact the chief investigator to discuss their participation in the research project and obtain an information sheet.

What if I require further information?
When you have read this information, Miss Lan Zhou will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact: Lan Zhou by calling 0403797339 or via E-mail: 17554419@student.uws.edu.au; Prof Michael Singh by calling (02) 4736 0186 or via E-mail: m.j.singh@uws.edu.au; Dr Jinhe Han by calling 0422652972 or via E-mail: j.han@uws.edu.au

What if I have a complaint?
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If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email: humanethics@uws.edu.au.

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

If you agree to participate in this study, you may be asked to sign the Participant Consent Form.
Participant Consent Form for Parents/Caregivers

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

**Note:** If not all of the text in the row is visible please 'click your cursor' anywhere on the page to expand the row. To view guidance on what is required in each section 'hover your cursor' over the bold text.

**Project Title:** Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners

I, [print name].................................. give consent for my child [print name]........................................... to participate in the research project titled "Re-theorising the teaching of Chinese as foreign language: Engaging teacher-researchers’ prior and new knowledge in educating Australian second language learners".

I acknowledge that:

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

The procedures 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 have discussed participation in the project with my child and my child agrees to their participation in the 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 my child will be used in any way that reveals my child’s identity.

I understand that my child’s participation in this project is voluntary. I can withdraw my child from the study at any time, without affecting their academic standing or relationship with the school and they are free to withdraw their participation at any time.

I consent to do the questionnaires and work sheets about Chinese teaching and learning. Please cross out any activity that you do not wish your child to participate in.

Signed (Parent/caregiver): .................................. Signed (child): ..................................

Name: .................................. Name: ..................................

Date: .................................. Date: ..................................

Where projects involve young people capable of consenting, a separate consent form should be developed. A parental consent form is still required.

Il 1.21-School of Education
University of Western Sydney
This study has been approved by the University of Western Sydney Human Research Ethics Committee. The Approval number is: H9975

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix 7: Participant Consent Form (Classroom Teachers)

Participant Consent Form

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

Note: If not all of the text in the row is visible please ‘click your cursor’ anywhere on the page to expand the row. To view guidance on what is required in each section ‘hover your cursor’ over the bold text.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging beginning teacher-researchers’ prior knowledge and new knowledge in educating Australian second language learners

I, .................................., consent to participate in the research project titled Re-theorising the teaching of Chinese as foreign language: Engaging beginning teacher-researchers’ prior knowledge and new knowledge in educating Australian second language learners.

I acknowledge that:

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

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

I consent to observe Miss Lan Zhou’s teaching practice and students’ performance during Chinese lessons in accordance with her research’s need, and participant in the interviews with her for one or twice. I consent to be interviewed at a agreed time and give my opinions and suggestions about Miss Lan Zhou’s teaching practice and students’ performance. I consent to the audio recording of my interviews. I understand that this participation is voluntary.

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 now or in the future.

Signed: __________________________________________

Name: __________________________________________

Date: __________________________________________

[1.21-School of Education]
This study has been approved by the University of Western Sydney Human Research Ethics Committee.

The Approval number is: H9975

If you have any complaints or reservations about the ethical conduct of this research, you may contact the Ethics Committee through the Office of Research Services on Tel +61 2 4736 0229 Fax +61 2 4736 0013 or email humanethics@uws.edu.au. Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix 8: Participant Consent Form (Tuck-shop attendant)

Participant Consent Form

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

Note: If not all of the text in the row is visible please 'click your cursor' anywhere on the page to expand the row. To view guidance on what is required in each section 'hover your cursor' over the bold text.

Project Title: Re-theorising the teaching of Chinese as foreign language: Engaging beginning teacher-researchers’ prior knowledge and new knowledge in educating Australian second language learners

I, ……………………………. consent to participate in the research project titled Re-theorising the teaching of Chinese as foreign language: Engaging beginning teacher-researchers’ prior knowledge and new knowledge in educating Australian second language learners.

I acknowledge that:

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

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

I consent to participate in the interviews with her for one or twice. I consent to be interviewed at a agreed time and give my opinions and suggestions about Miss Lan Zhou’s teaching practice and students’ performance. I consent to the audio recording of my interviews. I understand that this participation is voluntary.

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 now or in the future.

Signed:

Name:

Date:

1.21 School of Education
University of Western Sydney
This study has been approved by the University of Western Sydney Human Research Ethics Committee. The Approval number is: H9975

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Appendix 9: Student Questionnaire 1

Gender: boy / girl Year: Year 1 / Year 2 / Year 3

1. How much do you like to copy teacher’s pronunciation at the beginning of lesson?
   a. strongest ☆ ☆ ☆
   b. stronger ☆ ☆
   c. strong ☆

2. How much do you like to do gesture when we learn new words?
   a. strongest ☆ ☆ ☆
   b. stronger ☆ ☆
   c. strong ☆

3. The lovely piggy mouth and simile make it easier for you to say the words?
   a. Very easy ☆ ☆ ☆
   b. Easy ☆ ☆
   c. Not easy ☆

4. How much do you think it is easy for you to learn “happy birthday” in Chinese?
   a. Very easy ☆ ☆ ☆
   b. Easy ☆ ☆
   c. Not easy ☆

5. How much do you like to learn Chinese with music?
   a. strongest ☆ ☆ ☆
   b. stronger ☆ ☆
   c. strong ☆
# Appendix 10: Student Questionnaire 2

<table>
<thead>
<tr>
<th>Name</th>
<th>Class</th>
<th>Gender</th>
</tr>
</thead>
</table>

1. Do you learn Chinese anywhere else other than at school?
- a. yes
- b. no

2. When learning Chinese, I get you to use words in Chinese that you normally use in English, such as “dao” (here), “Ms, I know”. Do you find this helps learning Chinese:
- a. very easy
- b. easy
- c. not easy

3. Do you listen carefully to me carefully when I have other children when they are writing down the Chinese pronunciation in ‘English’?
- a. yes
- b. no

4. Writing Chinese pronunciation with English words, do you think this way of learning Chinese is:
- a. very easy
- b. easy
- c. not easy

5. How does the interaction between myself and you can help learn Chinese?
- a. very much ☆☆☆☆
- b. much ☆☆☆
- c. a little ☆

6. How successful do you feel you act like Chinese speaker in the classroom when we practice buying food at the canteen?
- a. very much ☆☆☆☆
- b. much ☆☆☆
- c. a little ☆

7. How successful do you feel when you speak Chinese at canteen/tuck-shop?
- a. very much ☆☆☆☆
b. much ☆☆
c. a little ☆

8. After we pretend to buy food in classroom, does it make buying food at canteen/tuck-shop in Chinese:
   a. very easy
   b. easy
   c. not easy

9. Is the canteen/tuck-shop a good place for you to practice Chinese:
   a. very often ☆☆☆
   b. often ☆☆
   c. not often ☆

10. Have you ever bought food in canteen (tuck-shop) in Chinese?
    a. yes-----reasons: [tick as much as you like]
        ① tuck-shop is a good place for me to practice Chinese
        ② I like to use the Chinese I have learnt
        ③ I feel sense of achievement and sense of identity
        ④ I can get self-regulation
        ⑤ other classmates have done it, so I also want to do it
    b. no ------reasons:
        ① the food I want is not on the Chinese menu, I did not know how to say the food I want in Chinese
        ② I am afraid to say it at the tuck-shop because other buyers may laugh me
        ③ I have not learn it very well

11. Where do you practice Chinese when I am not here:
    a. canteen/tuck-shop
    b. playground
    c. classroom
    d. home
    e. other places such as ______

12. How much really useful Chinese have you learned?
    a. very much ☆☆☆
    b. much ☆☆
    c. a little ☆
Appendix 11: Student Questionnaire 3

Gender | year
--- | ---

1. How much do you think number is easy for you to learn with picture?
   a. very easy  b. easy  c. not easy

2. How much do you think it is easy for you to learn week, time and money with learning numbers first?
   a. very easy  b. easy  c. not easy

3. How much do you think it is easy for you to learn week with learning “sing chee” first:
   a. very easy  b. easy  c. not easy

4. How much do you think it is easy for you to learn “yesterday”, “today” and “tomorrow” with learning “tian”(sky; heaven;day) first:
   a. very easy  b. easy  c. not easy

5. How much do you think it is easy for you to say “Yesterday was..” “Today is ..” “Tomorrow will be..” with the comparing the sentence in English and Chinese:
   a. very easy  b. easy  c. not easy

6. How much do you think it is easy for you to learn time with learning “dan” first:
   a. very easy  b. easy  c. not easy

7. How much do you think it is easy for you to learn money with learning “quie”(dollar;cent) first:
   a. very easy  b. easy  c. not easy

8. How much do you think learn key pattern is a good way for you to learn Chinese:
   a. strongest  ☆ ☆ ☆
   b. stronger  ☆ ☆
   c. strong ☆

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Appendix 12: Semi-structure interview (face-to-face interview schedule)

1. How do you think about I use music to teach young students Chinese?
2. Could you please tell me how young students are excited to learn Chinese with music?
3. Could you please tell me why young students could learn Chinese so quickly with music?
4. Could you please tell me the reason why young students like behavioural engagement and learn quickly with action?
5. Could you please tell me some characteristics about Australian primary school students?
6. How do you think about the lesson about tuck-shop?
7. How do you think about the idea that encourages students to practise Chinese at the school tuck-shop?
8. Could you please give me some evaluation of the teaching strategies I used for teaching students the tuck-shop topic and encouraging them to practise Chinese at the tuck-shop?
9. Do you think the students enjoy learning Chinese?
10. Can I ask how did you help my students if they forgot or less confidence to say it?
11. Could you please tell the steps my students practise Chinese for buying food here (tuck-shop)?
Appendix 13: The forms of paper interview and e-mail interview

Teaching step:
1. ask students to find out the same pattern in figure 1
2. show them Figure 2 to find out the same pattern in Chinese
3. teach them the same pattern of “星期”, then combine the numbers the students have learned.
4. practice to say “Monday” to “Sunday” in Chinese

Teaching step:
1. show students the picture and the video about the temple of heaven, introduce the concept and importance of “天” (sky, heaven, day) in Chinese
2. teach students to say and write “天” (sky, heaven, day)
3. Encourage students to find out the same pattern “天” in figure 3 (they cannot find the same pattern in English)
4. use figure 4 to teach them “yesterday”, “today” and “tomorrow” in Chinese
5. teaching them to say “yesterday was…”, “today is …”, “Tomorrow will be…” with comparing Chinese and English: In Chinese, the “ was, is, will be is deleted”, just combine key words together, like “今天星期二”
Teaching step:

1. use pronunciation similarity to teach “$dollar; cent” in figure 1

2. use table to teach “1 dollar” and so on comparing English and Chinese: figure 2

3. use table again to teach the structure of “1 dollar 10 cents”; figure 3: “cent” is deleted in Chinese, and “0” is also deleted

4. role play: act as shop lady and buyer: Say the money in Chinese and find out right paper money

<table>
<thead>
<tr>
<th>Question</th>
<th>Key words (two or three)</th>
<th>Reasons (two or three sentences)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do you think the scaffolding of teaching is reasonable or not? Why?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How do you think about the scaffolding of teaching key words (or the same pattern) like “week”, “$dollar; cent” first before combining them with numbers that students have learned?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Do you think this scaffolding can help students learn in an easy way or not? Why?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. How do you think about the role-play game?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 14: Students’ feedback for sociolinguistic-activity-based scaffolding

Positive evidence for sociolinguistic-activity-based scaffolding was not used as evidence:

I have practice at home and in canteen, everywhere I go and everyone enjoys it and they are very inspired to learn more. I even teach my baby cousin. (F/Y6)

I have learnt how to say how much in Chinese and it is important to learn how to speak Chinese because you might live in China and people won’t and learning how speaker is cool, awesome, funny and very important. It makes me feel cool and funny. (M/Y4)

The tuck-shop is another learning place to speak Chinese. I like to practice Chinese at home so I can get better at it. Chinese is very fun for me. (F/Y4)

I love learning Chinese in our classroom. It helps us improve new knowledge of the language. When you teach us new things in class, it helps us and it makes us listen. Because we want to learn Chinese and the way you teach is fun way. But it still teaches us just like hard way. (M/Y5)

I think it is a great experience to learn another language because it is fun and it is good to learn another language. If you go to China, it is good for that too. It is also useful if you have to look after someone from China. I think it is good for little children to learn this too. (F/Y6)

I have a great time with you and I have learned a lot. It is a good idea to learn China [Chinese] and the canteen is a good place to learn it. It is fun to learn a different language. (F/Y4)

I like learning Chinese because it is a really nice language and everyone should learn how to speak Chinese. That is why I want to learn much more. (M/Y6)

I like learning Chinese because it is interesting and fun. I would like to learn more useful and everyday words. (F/Y6)

I feel a bit confident about speaking Chinese. I feel completely fine to learn Chinese. (F/Y4)

I like learning Chinese. This is one of the funnest things I do at school. Learning in class is good and fun. (M/Y5)
Using Chinese in the tuckshop is really so good. I hope we can learn more so we can do something different. It is good education. (F/Y5)

I love practicing Chinese at canteen. It is a good way to learn better in class. Hopefully, we will get you again. But with the canteen food, I would like to learn more. (F/Y4)

I like Chinese because it is fun and it helps you at the canteen. I felt good at the canteen when I spoke Chinese and it was fun but I would like to learn more food and drink. I think I am a confident speaker. (M/Y6)

I like doing Chinese at the canteen. I feel confident at the canteen. I want to learn how to say all of the food in the canteen. So I get more. My sister learns Chinese at her high school and she tells me some words in Chinese. (M/Y5)

I want to learn Chinese. It looks fun. I think learning Chinese would be so much fun. I think I would be good at learning Chinese. I hope one day I will be learning lots of Chinese and talking Chinese. (F/Y6)

I would still love to go to the canteen and speak Chinese there. I hope we get to learn more stuff in Chinese. I would like to learn how to say that’s outside. So we can use some more words outside. (F/Y4)

**Counter-evidence for sociolinguistic-activity-based scaffolding was not used as evidence:**

I haven’t been to the canteen because I don’t like going and I bring my own food. (M/Y6)

I think I am a bit shy. I have not done anything at the canteen. Not confident. I am so used to buying in English, but I do not remember to do Chinese at canteen. I barely go to the canteen. I do not know how to say the things I want to buy. I do not learn Chinese at home. (F/Y6)

I like Chinese because it is so much fun. I do not know if I can remember how to say Chinese at the canteen. I forget every time I go to the canteen. (M/Y5)

It doesn’t have the food that I want to buy. (F/Y4)

If I was to go to the canteen, I think I would use the words but I don’t because I don’t want to spend my money in case I go somewhere and I have
to pay to go and if there is rides. I will spend my money on that and food for where I go. (F/Y6)

It think using Chinese at the tuck-shop is a great idea for children to learn Chinese but it gets difficult sometimes cause the food we want might not be the word we have learnt in you Chinese lesson. (F/Y6)

Evidence was used in Chapter 5:

I like the opportunity to learn Chinese and use the language in our everyday life and at the tuck-shop and speaking to myself. The tuck-shop idea is absolutely fantastic. I like being able to interact and I would like to learn how to read and write the basics. (, F/Y6)

It is very unique and I would like to learn more and teach my whole family because [they] encourage me to teach them more and more. So thank you for teaching me. I want you to teach me more. (F/Y6)

I feel using Chinese in the canteen is a bit embarrassing but I still like to do it. I feel learning about Chinese in the classroom very good and enjoyable. I love it. It is very fun. (F/Y4)

The canteen is a good place to practice and when I practice I get the pronunciation wrong so I get shy and sometimes don’t want to practice. But Chinese is really fun to do and cool. (M/Y5)
Appendix 15: Students’ feedback for pattern-based scaffolding

Positive evidence for pattern-based scaffolding was not used in Chapter 6:

I listen very well to what you say. You stay on subject and you speak clearly. (F/Y5)

It was easy to learn numbers in Chinese because we would practice all the time, because I have all ways wanted to learn Chinese with someone. Thank you very much for teaching me Chinese. (M/Y5)

I can learn Chinese because I always try my best to say the words. I also learn Chinese at home. (F/Y4)

We have learnt to say 1 to 100, learn to say today is jin tian, Wednesday is sing chee sun. We learnt to say money and weeks and time. I learnt all of this from listening to you. I followed your instruction. (M/Y4)

I learnt Chinese by tables and comparing English to Chinese, it was great. (M/Y5)

I learnt step by step how to translate our English to Chinees. I think that every lesson you should pay a little paragraph of Chinese and ask the children to guess what you said. (M/Y4)

Miss Zhou makes learning much more fun and Chinese is awesome and loves our class and teach us lots of fun stuff. Learning Chinese at school is really fun. (F/Y4)

I leant money because Miss Zhou explained really well on how to learn money. (F/Y4)

I learnt Chinese because when the tables were on the board it is easier because it says it in English and then Chinese. It was also because you show us one word and then add the other bars. (M/Y4)

I have learnt many things like how to write numbers in Chinese, time, money, weeks and days. I have learnt this in so many different ways, like using pictures to remember things and tables. I think this has made it a lot easier to learn and remember, and it is a really good experience. It is also something I could use now and later in my life. (F/Y6)

Because you show us one word and then add the other parts. (M/Y4)
Learning Chinese is easy because you explained it well. You also made it easy to learn about food from the tuck-shop attendant. (M/Y4)

I recommend everybody could learn Chinese because she combines the lessons. (M/Y6)

I think doing Chinese is a great thing because we are in a multicultural country and we might take a holiday to China and don’t have to worry about language because we have already learn. The easiest think in Chinese are numbers because if you know it, you can know the days and week. (F/Y5)

**Counter-evidence for pattern-based scaffolding was not used in Chapter 6:**

Money is easy to learn but sometimes I forget to drop the zero on the cents. (M/Y6)

I don’t know time and money yet but I still try to catch. (F/Y4)

I found today, yesterday and tomorrow hard. (F/Y5)

**Evidence was used in Chapter 6:**

I practice at home with my family and friends at school and I write everything in my book. (M/Y5)

I learn Chinese because I kept reading my Chinese that is in my book and Ms Zhou helped me a lot to learn Chinese and comparing English and Chinese helps too. (F/Y4)

I can learn Chinese by tables, comparing it to English. I think Chinese is fun to learn and is my best subject; you are a very nice teacher. Thank you for teaching Chinese to us. I like it. It is easy. (M/Y5)

The way I learn Chinese is by saying it in an easy pattern. We say a word in English then think of it in Chinese. Then we would see on the board what the actual Chinese way of saying that particular words. We also have a chart to help us remember. It would have on the chart, an Australian version and a Chinese version. (F/Y5)

In Chinese, it is very easy to learn because you teach it very easy and very simply and that is you are a good teacher. (M/Y4)
I think learning in Chinese with a table is much better because I have a bad mind in remembering and why you put up the table and it instantly comes back to my mind. (M/Y5)

It is really easy to learn Chinese with you because you make it easy. Chinese is easier than English. (F/Y6)

I learn Chinese because when the tables were on the board, it is easier because it says in English and then Chinese. (M/Y4)

The way I learn Chinese was easy and fun because we learnt with a table on the computer and we learnt so many different things like money, numbers, week, today, tomorrow. (F/Y6)

I learnt Chinese with Miss Zhou. She taught us money of a chart. She makes us learn it quickly an in a fun way. (M/Y6)