

Engaging Stage1 Students in Western Sydney Mandarin Classes
Through Pictographic Characters:
A Unit of Work for Stage 1 Children

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Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

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A solid black rectangular box used to redact the author's signature.

(Signature)

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List of Abbreviations

NESA	New South Wales Education Standards Authority
NSW	New South Wales
ROSETE	Research-Oriented School-Engaged Teacher Education
RPS	Rosebud Public School
TCSL	Teaching Chinese as a Second Language
TED	Technology, Education, Design

Abstract

This thesis reports a case study conducted in the Western Sydney region, where the teacher-researcher teaches Mandarin in a Stage 1 class. The study aimed to construct a localised unit of work that focuses on Chinese pictographic characters to improve student engagement. It adopted suggestions from local teachers and then applied six lessons for a specific class within a Western Sydney public school context. Data were collected from interviews, reflective journals, formative assessments, post-it notes questions and students' focus groups.

The teacher-researcher concludes that the unit of work has many positive effects. Games, pictures and videos help to increase student engagement behaviourally, emotionally and cognitively. Further, the pictographs help students develop stronger memories of the Chinese characters they learned. However, future research could focus on the writing order and pronunciation of Hanzi.

Keywords: pictographic characters, TCSL, unit of work, Stage 1 students

Chapter 1: Introduction

1.0 Introduction

First, this chapter presents the research background and the researcher's reasons for conducting a study for Stage 1 children. It addresses foreign Hanzi teaching, Chinese teaching in Australia, the current Mandarin learning situation in a specific primary school, the chosen teaching content and the teacher-researcher's personal context. Next, the research questions are outlined and an elaboration on the significance of the study provided.

1.1 Research Background

With the process of globalisation, many countries vigorously promote and spread their languages as an important means to enhance their international strength. As one of the most popular languages in the world, the promotion and dissemination of Chinese will enhance international understanding and cooperation between China and other countries. Therefore, teaching Chinese as a second language (TCSL) shoulders increasing responsibility and needs more development.

1.1.1 Personal context

Sydney has a considerable number of immigrants from countries all over the world who offer this city a unique multilingual environment. To actively teach language and culture, I decided to become a Research-Oriented School Engaged Teacher Education (ROSETE) volunteer to learn and work in Western Sydney public schools. As a member of the ROSETE program, I learned to design effective Mandarin classes for students so that they are pleased to take Chinese lessons and willing to use the Chinese language as part of their everyday schooling.

To equip me with more abilities and skills in teaching Mandarin, I joined a 10-day TCSL training group before coming to Australia. Further, my mother's strong interest in ancient Chinese culture has motivated me to learn Chinese calligraphy since primary school. Years of calligraphy instruction equipped me with the ability to appreciate the beauty of Hanzi. I also gained knowledge of the cultural and philosophical meanings behind Hanzi from my calligraphy teacher. During the third year in university, I enrolled in a course called 'A Brief Introduction to Chinese Culture', and noticed that traditionally, Chinese characters are

classified into six types following the principles of their formation. According to the authoritative dictionary *ShuoWenJieZi* written by Xu Shen from the Han Dynasty, the six types are pictographs, ideographs, compound ideographs, phono-semantic compounds, phonetic loan characters and derived cognates. Of the six types of Hanzi, pictographs are considered the most appropriate for foreign beginning-level Chinese learners as it represents visual images of the object.

1.1.2 About teaching Hanzi to foreign students

The Chinese language is completely different from the alphabetic system (Buckingham-Hsiao, 2018). Even though the Chinese language has become a worldwide communication tool and attracted progressively more foreigners' attention and learning, it is generally believed that learning the Chinese language is a challenge for foreigners due to its strokes and myriad of characters, which make it difficult to write and remember (Li, 2014). However, this relates to the time allotted to learning Chinese and the practice opportunities offered. The development of Hanzi records thousands of years of history of the Chinese nation. It is an important media to understand Chinese culture. As a symbol and carrier of Chinese history and culture, the teaching of Hanzi has become the most basic and important component of TCSL. Students whose first language is not Chinese may consider square Chinese characters abstract and irregular. Therefore, learning Chinese is difficult, and learning Chinese characters is even more difficult (Wang, 2019).

Research has shown that most foreign Chinese learners inappropriately memorise Hanzi. Some Mandarin teachers used to separate the relationship between form, sound and meaning, just like rote memorisation. This situation can be traced back to how English is taught in China. As Hu (2002, as cited in Moloney & Xu, 2016) insists, the traditional ways to teach English in China can be concluded as translation, rote learning, recitation of fixed patterns and vocabulary. However, applying those methods in teaching Hanzi to foreign students leads to low efficiency, especially for young children.

Therefore, new methods of teaching Hanzi to foreign students need to be developed. Demir (2017) affirms that pictures can ease difficulty learning vocabulary, and visuals are important parts of language learning. Compared to the traditional ways of teaching Hanzi, pupils might find it easier and more acceptable to learn Chinese characters through graphic pictures. This method manages to combine the learner's existing recognition, which alleviates their fear (Cheng, 2015) of writing Chinese characters and builds new schemas

to their recognition.

1.1.3 Chinese teaching in Australia

Chinese learning in Australia is confronted with a high drop-out rate (Orton, 2016). According to Orton (2016), there are mainly three factors accounting for this: it takes more time to master the Chinese language than other languages; the developing pedagogy and resources of TCSL; and students with no Chinese background feel they cannot compete with students of Chinese background in external examinations like the Higher School Certificate. Another reason might be some Chinese teachers have neglected to combine Chinese learning with the Australia context (Orton, 2016). Australia Chinese teachers who come from China may be used to traditional Chinese teaching; that is, the teacher presents the knowledge, and students learn it through listening and doing homework after class. Influenced by their past educational background, teachers from China have relied on textbooks to deliver knowledge. However, many Australia primary schools do not use textbooks at all. Teachers design their classes based on the curriculum. According to the teacher-researcher's observation in Western Sydney public schools, the classroom atmosphere is often more active than in classes in China, especially in primary schools. Students prefer to learn through activities, and local teachers are inclined to inspire self-directed learning among students. However, teachers from China might be impacted by their previous learning practice because 'education also concerns moral development, teaching should encourage imitation of socially approved models and collective orientations but should discourage individuality and fulfilment of personal needs and self-expression' (Moloney & Xu, 2016, p. 6). Therefore, Moloney and Xu (2016) claim that educators of TCSL need to diversify their pedagogy in a different educational situation to encourage learning. For this reason, it is very important to teach Mandarin locally.

1.1.4 Current Mandarin learning situation in RPS

Since 2010, ROSETE volunteer teachers have been working in Rosebud Public School (RPS; anonymised name) to offer Mandarin classes for students from kindergarten to Year 6. Mandarin is the only foreign language taught in this school. Since there is no homework or formal test designed for students, most of them merely regard the Mandarin lesson as one of the many interesting lessons. Also, students are only taught Mandarin for 30 minutes per week. This might be considered a 'culture taste' rather than language learning, although sometimes it includes some language parts (Orton, 2016).

To date, what has been taught in Mandarin class at RPS includes greetings, numbers, colours, animals, festivals, foods and Chinese zodiacs. Students can only identify basic topics like numbers and colours. Regarding speaking production, most students have only grasped how to say ‘hello’ and ‘goodbye’ in Chinese. Although they have access to write Hanzi, most students cannot remember any characters except some simple numbers because writing Hanzi is not considered an important teaching objective by current ROSETE volunteer teachers. As the only foreign language subject at RPS, Mandarin is a different system from English. Students are inclined to disengage in the Mandarin classes due to the difficulty and strangeness. At one point, a kindergarten student said, ‘I do not want to do this worksheet, it is so boring’. ‘Boring’ might not be a word that kindergarten students use sensibly. This particular student may have used it to mean that he could not work it out or follow up successfully. Another RPS student said, ‘I just hope the next class will not be Mandarin’. Thus, there is a question over how to engage students in Western Sydney in Mandarin class. However, during the second week I visited RPS, I found students were interested in writing Hanzi. When one of the ROSETE 11 (The 11th ROSETE program) volunteer teachers taught Hanzi in her lesson, she told students they could skip some difficult words, such as 鸡 (chicken). To our surprise, almost all students said they wanted to try and began to practice this word several times on the whiteboard. However, the learning effect was not as expected. No one remembered how to write this word after class. This might be because they did not have enough time to practice or only engaged behaviourally rather than cognitively.

These experiences drove me to consider applying some useful Hanzi teaching methods to mobilise students’ emotional and cognitive engagement.

1.1.5 Applying pictographs to Hanzi teaching in RPS

Language affects culture and vice versa. During the process of Chinese language acquisition, learning Hanzi is difficult for foreign learners to accept and master. Wang (2019) notes that applying various methods could be useful, including using images, sounds and actions. It is also important for students to understand the shape, pronunciation and meaning simultaneously (Wang, 2019). Research conducted by Low et al. (2009) showed that young students have strong interests in memorising Chinese characters through a system that ‘consists of the elements of visualizing, mind mapping, learning and entertaining’ (p. 301). Children attain more understanding of the origin of the Chinese character in such an

interesting learning situation. Given that pictographic characters ‘depend on picture-like properties’ (Lo & Yeh, 2018, p. 2), it could be a practical method for students to master meaning and shape together. As a member of the ROSETE Program, one of my most important responsibilities is to contribute to the studies of TCSL pedagogy. Considering the above and the current learning situation at RPS, the teacher-researcher decided to engage Stage 1 students in Mandarin class through pictographic characters by delivering a unit of work.

1.2 Research Questions

This study’s main research question is:

How may a teacher-researcher design a unit of work that can engage Stage 1 students in Western Sydney Mandarin classes following the theme of pictographic characters?

The contributory research questions are:

- 1) What helps Stage 1 students learn Chinese pictographic characters?
- 2) How will Stage 1 students engage in the Mandarin lesson when applying the unit of work?

1.3 Significance of this Study

1.3.1 Significance to Hanzi teaching in TCSL

This study’s initial significance is that it contributes to the knowledge of Hanzi pedagogy in the area of TCSL. Li (2004) pointed out that at the 5th International TCSL Teaching Seminar (1996), experts and scholars called for attention to Chinese characters and proposed there should be more research on Hanzi teaching due to weak teaching methods and a lack of research in this field. Cole (1997), president of the German-speaking Chinese Teaching Association, holds a similar view. He stated that the two biggest challenges faced by TCSL are (1) integration with culture and language teaching, and (2) the teaching of Hanzi. He suggested that if these two challenges are not accepted, there is no possibility of further development of TCSL. He also pointed out that within the field of TCSL, the most important concerns are how to understand the status of Hanzi teaching in TCSL, how to break through the difficulty of Hanzi teaching, and how to change the lagging situation of research into Hanzi teaching and make Hanzi teaching out of the predicament. The

overarching purpose of the present research is to design a unit of work on Chinese pictographic characters and anticipate how it may potentially improve learning in Western Sydney Mandarin classes based on three teachers' estimation. The unit may subsequently offer a resource to facilitate the learning of Chinese by English speaking learners in Australian schools for whom English is their everyday language of instruction and communication. The outcome of this research may contribute to Hanzi pedagogy in the area of TCSL. Further, it improves the basic understanding of Western Sydney Mandarin classes and mastering the individual learning styles of Australian pupils in Mandarin learning.

1.3.2 Significance to the Chinese language teachers in NSW

This study's secondary significance is that it might enrich the teaching resource for Chinese language teachers in New South Wales (NSW). As noted earlier, many Chinese language teachers in Australia are judged negatively for failing to adopt teaching methods in an 'Australia way' (Orton, 2008). The unit of work designed by the teacher-researcher for this study includes 10 lesson plans based on feedback from three NSW primary school teachers. Two local Australian teachers gave their professional feedbacks about whether these lesson plans are applicable and effective for local Australia students. The Chinese background teacher offered some important feedback based on her past teaching experiences in NSW. Therefore, the unit of work can be a reference for Chinese language teachers in NSW to conduct Hanzi teaching.

1.3.3 Significance to the ROSETE program

The tertiary significance of this research is that it also provides teaching references for future ROSETE volunteers. Most of the ROSETE volunteers do not have existing experience teaching in a foreign country, so it can be challenging for them to adapt effective methods in Western Sydney public schools. Therefore, this research offers some references for future ROSETE volunteers conducting Mandarin lessons with Stage 1 students, especially those allocated to RPS. This research also provides insights into how Chinese pictographic characters may potentially influence student engagement based on three teachers' estimation.

Chapter 2: Literature Review

2.0 Introduction

This chapter reviews the literature relevant to the research questions. The main research question focuses on classroom engagement when teaching students Chinese pictographic characters. Therefore, this chapter looks at the following aspects concerning using pictographs to teach Mandarin. First, it looks at the schema theory, which moves from prior knowledge to new knowledge, to explain why the teacher-researcher determined to use pictographs to teach Mandarin. Second, it reviews the literature on pictographs and their teaching effectiveness. Third, it explores relevant teaching approaches with young children. Finally, the chapter outlines the definition and dimensions of student engagement and identifies the gaps in previous studies.

2.1 Schema Theory

This section reviews the development of schema theory. Examples will be provided of TCSL research that has been conducted under the guidance of schema theory. Finally, the teacher-researcher discusses how using pictographs can help students build new schemas for Chinese words.

2.1.1 What is schema theory?

It is important to define ‘schema’, which serves as a framework for this research. The term ‘schema’ was originally found in the works of some philosophers and psychologists, which can be traced back to the 1780s. It was first presented by Immanuel Kant. Kant used the theory of transcendentalism to explain the philosophical meaning of schema; that is, people attribute meanings to objects that have happened in their past. This has been applied frequently in teaching a second language (Carrell & Eisterhold, 1983).

Bartlett (1932) defined ‘schema’ as ‘an active organization of past reactions, or of past experiences, which must be supposed to be operating in any well-adapted organic response’ (p. 20). As Nassaji (2007) highlights, Bartlett used schema theory ‘to account for how information in stories and events is reconfigured in memory for further recall’ (p. 80). Bartlett further developed Kant’s idea and the conception of ‘schema’ by exploring the relationship between the social environment and memory constructs. He maintained that

people's understanding of objects is shaped by their prior knowledge, and this relationship can be seen as schema. The dynamic organisation of humans' past experiences and the notion of schema is applied to the study of memory and knowledge structure. Memory is not a mental process completed by rote memorisation but a process of creating impressions through the context of the time and then recreating details based on the overall impression.

The famous psychologist Piaget (1896–1980) subsequently improved schema theory through experimental research. He borrowed Kant's conception of schema to put forward the theory of genetic epistemology and modern cognitive psychology. He defined schema theory as a cognitive study of language that focuses on the relationship between the mind and linguistic behaviour (Piaget, 1952). He emphasised that human cognitive ability starts from a schema, which is the foundation of knowledge. Piaget believed schema theory was influenced both genetically and by the environment; that is, a schema exists because of heredity, but it will change following the outside world (Hui, 2010). Not only does the schema theory advocated by Piaget shed light on how human cognition occurs and evolves, but it also renders a new perspective for second language learning (Al-Issa, 2011; Nassaji, 2007).

In the 1980s, Anderson further expanded schema theory. He claimed that schema is a structure that contains experience and individual knowledge. It gets divided into different parts according to similarities, so it will be more convenient to search for saved information and incorporate new information (Anderson, 2012, as cited in Farangi & Kheradmand, 2017). Thus, Anderson believed that schema theory could offer meanings and organisations for experience so people can gain more than their original information. For example, sometimes people can know the basic meaning of a whole passage after reading the title because schema can help infer the main idea through the heading.

In conclusion, the theory of comprehension based on schema is called schema theory (Nunan, 1999). When a person is exposed to an unfamiliar environment, it is helpful to react according to their original knowledge in memory.

2.1.2 Schema theory and TCSL

Chinese scholars began to pay attention to schema theory in the 1980s. Peng (2010) emphasised that the process of schema construction and activation can help strengthen foreign writing training. Chen (2014) held the belief that the introduction of schema theory

in the listening of TCSL can give full play to students' cognitive abilities and help students actively mobilise their original background knowledge. Using schemas to provide background knowledge, students can predict what will be heard. The introduction of schema theory in TCSL can increase students' confidence in listening training, increase their interest in listening to learning, and stimulate students' initiative in listening. Huang and Zhu (2013) concluded that the mental lexicon and semantic field schemata of schema theory could play a positive role in Chinese vocabulary memory. Questions generated by the extended practice mode of schema theory can help students further consolidate the knowledge and enhance the vocabulary memory. Using games evolved from schema theory can motivate students' learning enthusiasm and avoid the negative influence brought by a different teaching model. Fan et al. (2016) claimed that the traditional TCSL teaching method of reading considered new words and grammar as the learning centre, which resulted in passive reading among students. Applying schema theory to reading can guide students to build new connections between existing knowledge and new knowledge, helping to construct new schemas. Lu (2018) summed up the experience of former teachers of TCSL and combined it with her specific teaching practice to state how to use image schema to incorporate elementary Chinese listening, speaking and reading.

Based on the existing literature, it is not difficult to conclude that building new schemas of listening, speaking, reading and writing in TCSL may help foreign learners master the Chinese language more quickly. During the teaching process of TCSL, it is meaningful for teachers to help students clarify their learning goals and understand their current level of Chinese knowledge. Then, students can be guided to use the schemas they have mastered before to activate new schemas. It is the new schemas that continuously encourage students to achieve a better level.

2.1.3 Schema theory and pictographs

As discussed above, some literature has already combined schema theory and TCSL. Most of the literature pays attention to the schema itself and makes students create their schema related to Chinese. Based on the research of the application of schema theory to TCSL, it is clear that schema theory plays a crucial role in Chinese language learning.

In this research, the teacher-researcher considers the connection between students' native language and objects as their original schema. After learning the shape and meaning of Hanzi through the pictographic model, students can develop their new schemas about

Chinese pictographic characters and objects. For example, when students see a mountain, they will think of the vocabulary of 'MOUNTAIN'. It is their original schema that has been built from their past learning. The Chinese word '山' developed from its image (see Figure 2.1). Since students already know what a mountain looks like, after being introduced to the image and the word '山' in Mandarin, the Chinese word '山' will add to their original schema. Next time they see a mountain in the real world, they might think of the Chinese word '山'. The nature of learning a language is to build unknown to known. As Singh and Han (2014) stated, 'having learners learn anything new is best done by the Ningbo Volunteers relating what learners already know to what has to be learned' (p. 417). Thus, since Stage1 students already have many schemas in their minds and pictographic characters have visual characteristics, it is easier for learners to develop their new schemas about the shape of the character and its meaning.



Figure 2.1 Image of mountain

2.2 Chinese Pictographic Characters

This section reviews the origin and categorisation of the Chinese pictographic characters. It then explores the research on pictographs and TCSL.

2.2.1 What are pictographic characters?

Pictographs are one of the earliest types of Chinese character and the basic composition of compound characters (Wang, 2014). Ancient Chinese scholar Xu Shen (2013) claimed that Chinese pictographs mean that the specific object is expressed in the form of painting with a wave and a zigzag that corresponds to the shape of the natural object, such as '日' (sun)

and ‘月’ (moon). Chinese characters have evolved over a long time, resulting in some pictographic characters losing part of their picture. It might be difficult to understand the meaning when learners see pictographic characters for the first time. However, the characters indicate that pictographs are created by drawings that are based on close observation in life and the natural world. As Han (2017) notes, there is a relationship between the writing form of Chinese pictographic characters and their meaning. Therefore, Chinese pictographs abstractly summarise the appearance and overall characteristics of the objects they describe, vividly presented in their meaning.

In 2002, the Hanyu Shuiping Kaoshi Department of the Office in the National Leadership Group for TCSL published the ‘Outline of Chinese Vocabulary and Chinese Character Levels’, which divided 2,905 common words into Levels A, B, C and D. Table 2.1 shows some examples of pictographic characters in Level A (see Appendix C). The following section explains this table further.

Table 2.1 The categorisation of pictographs

Standards of categorisation	Examples
Human body	人(people)、口(mouth)、目(eye)、手(hand)、心(heart)、面(face)、身(body)、子(son)、女(daughter)...
Utensil	刀(knife)、衣(cloth)、车(car)、舟(ship)、玉(jade)、矛(spear)、壶(pot)...
Natural phenomenon	日(sun)、月(moon)、云(cloud)、气(air)、火(fire)、川(stream)、水(water)、井(well)、雨(rain)、泉(spring)、山(mountain)、土(soil)、田(field)、雷(thunder)...
Animal	马(horse)、犬(dog)、牛(cow)、羊(ship)、贝(shell)、虫(worm)、鱼(fish)、龟(turtle)、象(elephant)、虎(tiger)、兔(rabbit)、龙(dragon)、凤(phoenix)、鹿(deer)、鼠(rat)、鸟(bird)、燕(swallow)、肉(meat)...
Plant	豆(bean)、木(wood)、禾(millet)、米(rice)、竹(bamboo)、瓜(melon)、果(fruit)、桑(mulberry)...

2.2.2 Pictographs and TCSL

An extensive body of research has shown that it is effective to apply pictographs to teaching Hanzi to foreign students. In 2005, Luk and Bialystok researched whether picture-based Chinese characters can be helpful to understand Mandarin. In their study, 30 adults with no prior knowledge of Chinese guessed the meanings of 20 Chinese characters by choosing between one of two photographs. By demonstrating the effectiveness of pictures for combining certain characters and their meaning, the result showed significant indications for using visual features of Hanzi pedagogically for Chinese literacy construction. Further,

Shen's (2010) study showed critical importance during the retention between the shape and meaning of abstract Chinese characters. The study demonstrated the importance of visual learning in Chinese vocabulary acquisition among beginning foreign learners. In addition, Zhang et al. (2016) have claimed that TCSL teachers need to master the characters of pictographs so students can explore the wonderland behind characters and appreciate the picture fascination of pictographs.

Linge (2018) stated that because pictographs are the most fundamental characters in Chinese and frequently appear in compounds, it is important to learn how they work. During the process of interpreting pictographs, students can combine the shape with the meaning contained in Hanzi. Thus, memorisation becomes easier once there is an understanding of what the pictograph represents. As Yan has stressed in Berg's (2013) report, students will learn Chinese characters more quickly through pictographs because drawing helps promote students' understanding of Hanzi. Consequently, students may understand the culture and life in ancient times by understanding the formation of the pictographs, which may contribute to their language acquisition. Considering these factors, this research will apply pictographic characters to engage students in Hanzi learning.

2.3 Approaches with Young Learners

This section illustrates several approaches that are effective in language learning with young students. First, keeping a consistent lesson structure helps students become familiar with the lesson. Second, revision is a significant step in teaching that consolidates students' learning. Third, game-based learning is the main pedagogy in this research. Finally, visual aids are also considered an important approach across this whole unit.

2.3.1 Consistency

According to the literature, consistent lesson structures and consistent routines play an important role in the classroom. Badley (2019) asserts that 'teachers need to keep many larger structures and routines consistent because students find safety in predictability' (p. 125). This indicates that following the teacher's instruction is easier for students when they know the whole structure in general. First, structured lesson plans make learning more systematic (Vaccari et al., 2020). For young learners, it can be important to keep the class routine simple and predictable. Second, routines help to build a basic understanding of how to behave in this class together. They are conducive to daily management in terms of

shaping the classroom climate and engaging students (Harper & O'Brien, 2015).

2.3.2 Game-based learning

Game-based learning provides an opportunity for students to gain knowledge with a sense of achievement (Qian & Clark, 2016). Usually, games are offered as an optional means for practice, not a necessary method of learning. However, in recent decades, the literature has identified that games, including virtual games or online games, can be effectively used in foreign language teaching. This might be because the method of games can help learners sustain interests (Wright et al., 2004). It might also be due to games benefiting students in terms of motivation (James & Mayer, 2019). Rawendy et al. (2017) concluded that creative and attractive learning tools could motivate children to have better outcomes than traditional methods because learning with games can prevent students from disengaging from the learning contents. In addition, Pasfield-Neofitou (2014) highlighted that virtual games offer an ideal environment for language learning in both first language literacy development and second language acquisition.

Game-based learning has also been applied in TCSL. A pilot study conducted by Chao et al. (2007) showed that using an interactive interpretation digital game for learning Chinese increased students' opportunities to practice spoken Chinese and improved learners' confidence in speaking. Applying games in teaching Chinese numbers were found to consolidate students' knowledge in an American class (L. Xu, 2013). Chen and Lin (2016) demonstrated that applying games in Chinese poetry learning helped create a more interactive environment for students, and they gained deeper understandings of the poems. Moreover, this learning method was found to suit both male and female students and prompted their Chinese poetry learning. The application of games in a foreign Mandarin class helped create a better learning environment in which students could learn actively and develop stronger interest (Chen, 2017). Ying et al. (2016) also claimed that games were effective in maintaining students' interest in learning Chinese. However, they also argued that 'learn[ing] Chinese language in game-based learning is not enough to get effective learning in Chinese characters without mnemonic method' (p. 174). This indicates that games function as an auxiliary rather than main method for learning Chinese.

2.3.3 Visual aids

Adopting pictures, images, or other visual aids into language learning is not a new method. A considerable amount of literature has shown that visual pedagogy plays a significant role in language learning. For example, Caviglioli and Harris (2003) affirmed that visual tools could be served as effective retention aids in leaning. Zhang et al. (2011) contended that ‘visual word recognition’ is a vital step in reading (p. 957), finding that compared to objects, pictographs can elicit a stronger N170, which is a component that reflects the process of visual cognition on students. Their research has shown a faster and stronger N170 response to pictographs that are clearly linked to a Chinese character. This indicates that neural functions are sensitive to visual characters.

Students now have an increasing number of methods to access visual data (Wood, 2016), which can be applied in pictures and videos in a language classroom. Duncum (2020) asserted that “Pictures are a powerful form of pedagogy” (p.1). A study conducted by Apsari (2017) revealed that using pictures can improve students’ acquisition of vocabularies. It also aroused students’ interest and helped create a more enjoyable atmosphere. Further, as young students are attracted by pictures, teaching Chinese pictographic characters through drawing pictures aligns with students’ cognitive characteristics (Wen & Lu, 2021). Alternatively, Cakir (2006) demonstrated that audio-video material positively contributes to foreign language learning in terms of stimulating and facilitating the target language. For example, Yuan (2020) suggested using videos in TCSL classes to stimulate students’ interest. Moreover, videos are vivid for students, which enables teachers to create a favourable environment for foreign learners to use Chinese language and think cognitively (Chen, 2020).

2.3.4 Storytelling

According to the Chinese K–10 syllabus, ‘English may be used for discussion, explanation or analysis and reflection, providing opportunities for students to develop metalanguage for sharing ideas about language, culture and experience’ (NSW Education Standards Authority [NESA], 2017, p. 28). Bežilová (2019) observed that stories help engage students by motivating them to be curious and stay focused. Research conducted by Oakley et al. (2018) demonstrated that stories are effective to support Chinese learning and intercultural understanding. Speaker et al. (2004) asserted that children tend to have a stronger understanding of vocabularies and grammar when frequently exposed to

stories. Similarly, Lucarevski (2016) contended that storytelling is an effective pedagogical instrument for second language learners to improve their language skills.

2.4 Student Engagement

This section reviews the definitions and dimensions of student engagement. The three types of engagement are named as behavioural engagement, emotional engagement and cognitive engagement.

2.4.1 What is student engagement?

Different scholars have varying definitions of student engagement. This research adopts Sawyer et al.'s (2013) definition of student engagement, which contains small 'e'ngagement and big 'E'ngagement (see Figure 2.2). Small 'e'ngagement refers to what happens in the classroom. Students follow the teacher's instructions and develop a positive attitude to their teacher and the subject. Big 'E'ngagement is the more enduring and long-lasting relationship with school and education. Students have a feeling about not only what happened in the classroom but also what happened at school. They feel that the school plays an important role for them educationally, socially and culturally. Both the small 'e'ngagement and big 'E'ngagement are on a continuum; the main focus in this research is the small 'e'ngagement.



Figure 2.2 Connections between 'E'ngagement and 'e'ngagement

Several studies mentioned the relationship between student engagement and academic achievement: 'Researchers have proposed theoretical models suggesting that student engagement predicts subsequent achievement and success in school' (Skinner & Belmont, 1993, as cited in Fredricks et al., 2011, p.2). Scheidler (2012) asserted that student engagement positively relates to their academic outcomes. Well-engaged students will have positive learning outcomes; that is, students are more likely to attain high scores if they are

well engaged (behaviourally, cognitively and emotionally) in the classroom. Conversely, disengaged students are more likely to develop negative emotions towards study. Consequently, they will not work hard for better results (Skinner & Belmont, 1993, as cited in Fredricks et al., 2011), which is one reason why this study focuses on student classroom engagement.

2.4.2 Multiple dimensions of student engagement

The literature shows that student engagement has multiple dimensions, but it is generally defined as having three categories, including behavioural engagement, emotional engagement and cognitive engagement (Fredricks et al., 2004, as cited in Fredricks et al., 2011).

Behavioural engagement

Behavioural engagement focuses on both academic and non-academic involvement. It is highly connected with drop-out rates in later years of school and students' learning results (Fredricks et al., 2011). If students engage in the class behaviourally, they will follow several standards, such as attendance and involvement. Moreover, some misconduct will decrease (Trowler, 2010). Behavioural engagement is linked to learning involvement, such as the amount of time students concentrate on their tasks. (Jimerson et al., as cited in Ding et al., 2018). Such research mainly measures behavioural engagement in the academic field, and utilises data from the teacher-researcher's reflective journal, which records students' classroom performance—such as initiative, reactions and facial expressions—to answer the research question.

Emotional engagement

Shuck and Wollard (2010) broadly defined emotional engagement as 'the feelings and beliefs held by those who are engaged' (p. 105). Fredricks et al. (2011) maintained that emotional engagement refers to students' attitudes towards school and all the staff, which will decide whether they have the initiative to learn or not. Sinatra et al. (2015) claimed that engagement could be noticed by students' affective reactions to their teacher and subject. A pleasant mood will lead to better engagement and participation. Conversely, inactive emotion may cause students to become lost in the learning process. Emotions can promote learning both positively and negatively, but according to the former research,

positive emotions play a more important role in students' engagement (Broughton et al., 2011; Heddy & Sinatra, 2013, as cited in Sinatra et al., 2015). Thus, it is important to measure emotional engagement, as affective responses to education impact students' achievement and retention in schooling (Appleton et al. 2008; Gray & Hackling 2009; Mansour et al. 2016, as cited in Morris, 2019, p. 451). In this research, the teacher-researcher examined students' emotional engagement through classroom observation.

Cognitive engagement

Cognitive engagement is about learning and knowing; it includes a willingness to work out difficulties (Fredricks et al., 2011; Sinatra et al., 2015). Some researchers have stated that cognitive engagement is related to self-regulation in working out the difficulties. For example, students' application of reasoning, critiquing and analysing in the process of reading and writing can be regarded as cognitive engagement (Zhu, 2006, as cited in Ding et al., 2018). This indicates that learning is a process of cognitive participation, which affects the quality of student learning. Higher cognitive engagement produces more positive achievement (Sinatra et al., 2015). Students' cognitive engagement was observed in the current study by their post-it notes and discussion among a focus group. Post-it notes were used by students to provide feedback about what helped them and what hindered them during the process of learning Chinese pictographic characters. Section 3.5.4 explains the use of post-it notes as a data collection method.

Moreover, there is also a concept called agentic engagement, which refers to students engaging in the class very proactively. Bandura (as cited in Sinatra et al., 2015) stated that students 'do not just react but also exert their agency by enriching, personalizing, modifying, or requesting instruction' (p. 3). However, this notion is comparatively new, and further research is needed to explore it, so the current study did not focus on it. It has been listed here to show the multiple dimensions of student engagement.

2.5 Gaps in Previous Studies

As mentioned earlier, there are many examples of TCSL research about Chinese pictographic characters. However, there is almost no research that has been conducted to combine pictographs with student engagement. There are also many examples of theoretical and practical studies on student engagement, but little attention has been paid to engagement and TCSL. Thus, there is a research gap regarding the relationship between

foreign Mandarin classroom engagement and pictographic characters. The use of pictographs may enable effective learning happens among younger students and this is the reason why the study is important. The exploration of this relationship is the main goal of the current research.

Chapter 3: Methodology

3.0 Introduction

This chapter discusses the methodology of this research. The method originally planned for this study was for all 10 lessons to be implemented at a school in Western Sydney. However, the changes due to the COVID-19 pandemic meant the original plan did not eventuate. Instead, only six lessons were implemented in a school, and four lessons were not implemented in a school. All the lesson plans were discussed with three teachers (see Table 3.1). Consequently, the research design became a case study of the process. The interviews served as a qualitative research tool, then data collection methods and data analysis were conducted. The research principles are addressed at the end of the chapter.

Table 3.1 Timeline of the case study

June–October 2020	Interviews with three teachers
July–September 2020	Six lessons implemented

3.1 Qualitative Research

According to Johnson and Christensen (2019), ‘research can be fully qualitative or mixed with an emphasis on qualitative, fully quantitative or mixed’ (p. 32). Qualitative research was chosen to be the research method for this study. As Gay et al. (2009) stated:

Qualitative research differs from quantitative research in two ways: (1) Qualitative research often involves the simultaneous collection of a wealth of narrative and visual data over an extended period of time, and (2) as much as is possible, data collection occurs in a naturalistic setting (p. 7).

As can be seen from this comparison, in qualitative research, the researcher simultaneously collects both narrative and visual data, which perfectly accords with the teacher-researcher’s context. Originally, the teacher-researcher was allocated to conduct Mandarin classes on her own for four terms in one primary school and one high school. In reality, the teacher-researcher observed classes for one term and taught for one and a half terms (seven lessons in Term 1 and seven lessons in Term 3), which provided the opportunity to collect data from students. It also allowed the collection of local teachers’ suggestions first, followed by a reflection on the teaching practices. Qualitative research is employed to

explore more information about specific problems (Johnson & Christensen, 2019). The collected data in qualitative research may be in the form of words from specific activities such as observations or interviews. Qualitative researchers pay less attention to determining objective statistical conclusions or testing a hypothesis. Rather, they attain insights about concrete research questions directly related to the real-world problem.

The teacher-researcher wanted to design a localised unit of work following the teachers' feedback and see the student engagement during Western Sydney Mandarin classes when applying specific lesson plans. Therefore, this study is about qualitative data using structured and validated data collection instruments. The teacher-researcher needed to collect the unstructured information that can be analysed from interviews, the reflective journal, students' feedback, students' formative assessments and focus group comments.

3.2 Case Study

Considering the nature of the research questions, case study was chosen as the research methodology in this study. This section offers an overview of case study by providing a definition and then explaining the reasons for choosing the case study method.

Case study is a form of qualitative research that helps gain details or a deep understanding of one or more cases (Mill & Christensen, 2017; Yin, 2018). It mainly focuses on the particular rather than the general (Thomas, 2011). Yin (1994) proposed the following definition:

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident (p. 13).

Later, Gillham (2000) offered a broader definition:

Case study research is an inquiry that focuses on describing, understanding, predicting, and/or controlling the individual (i.e., process, animal, person, household, organization, group, industry, culture, or nationality) (p. 1).

As this description shows, the objective of a case study might be an individual event or a phenomenon. Thomas (2011) confirmed that the 'case' in a case study design could be anything, such as a person, a school, an organisation or a country.

This research focused on two aspects. First, it discussed the process of designing an

appropriate unit of work related to Chinese pictographic characters for a Stage 1 Mandarin class located in a Western Sydney school. Second, it discussed the results of students' learning when being applied by the former six lesson plans. In light of the above-mentioned characteristics and the research focus in this study, the case study is preferred and adopted as this study's main research method.

In this case study, the case is a unit of work. It contains 10 lesson plans related to Chinese pictographic characters; the first six lessons were conducted in Term 3. As the unit of work is a system of action, which includes feedback and comments from three primary school teachers. Therefore, the analysis also considers the voices of the teachers.

3.3 Original Lesson Plans for the Unit

An original unit of work was based on the teacher-researcher's past learning experience in a primary school setting. The content of the unit was guided by the schema theory so that all the selected Hanzi were close to students' real life. It was further developed after an extensive literature review, including approaches with young learners and documents published by the Department of Education in NSW.

There were 10 lesson plans in this unit of work; each lesson lasts 30 minutes. The structure of each lesson can be divided into two parts. The first half of the lesson follows the greetings and presentation of the pictographs. While presenting the evolution, tone and meaning of pictographs, students will use a pen to write the word correctly to experience the process of writing Hanzi and develop their abilities to identify and remember them. For the rest of the lesson, students will be involved in some activities.

As mentioned in Section 2.2, this research focuses on teaching pictographic characters. Selecting appropriate characters for Stage 1 students was a significant step, considering two main factors. First, all the selected participants were beginning Chinese learners in Stage 1; most only had one to two years of Chinese language learning experience. Therefore, they were in the lower abilities of prior proficiency in Chinese characters. Second, according to the Chinese K–10 syllabus, Stage 1 students are supposed to be 'using Hanzi and images to convey ideas in imaginative texts, e.g. using pictographs, including 马、田、山 to illustrate an imagined event' (NESA, 2017, p. 45). At the understanding level, students are expected to 'recognise Hanzi as a form of writing'; for example, 'recognising that each

Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g. 人、日’ (NESA, 2017, p. 46). Therefore, considering language learning is expected to be relevant to the lives of students and the framework provided by the NESA syllabuses, the teacher-researcher planned to employ pictographs about natural phenomena and human body parts as the two teaching topics of this unit.

This unit’s teaching objective is for students to master the pronunciation, shape and meaning of each pictograph. Also, as students do not have homework from the Mandarin class, only one or two new pictographic characters are introduced in each lesson.

3.4 Sites and Participants

This section discusses the targeted class and the participants.

3.4.1 Targeted school

As the teacher-researcher is a participant of the ROSETE program, the allocated schools are decided by the program’s manager. From October to December 2019, the teacher-researcher engaged in observing classes in two schools in the Western Sydney region. The primary school (RPS) is the selected site for the teacher-researcher to conduct research and collect data.

First, Chinese is the only foreign language subject at RPS, and the length of each lesson is 30 minutes. This school has a Chinese club each Wednesday afternoon, which is not compulsory for everyone. Students who have interests in the Chinese language or Chinese culture attend the club to consolidate what they were taught in the Mandarin class. They can also practice writing Chinese calligraphy and complete some attractive worksheets, such as traditional figures in ancient Chinese fairy tales designed for them to learn Chinese culture. Moreover, the club provides a wonderful opportunity for students and ROSETE volunteers to communicate and learn about each other. Volunteer teachers are not allowed to offer Chinese classes to students individually, so there is always a classroom teacher in attendance to help with classroom management (Australian Institute for Teaching and School Leadership, 2011). For example, when the class became noisy, the classroom teacher would calm down the students by saying, “No one talks unless your Mandarin teacher asks you to say something” or “Please show your respect to your Mandarin teacher”. They do not only help to manage the students’ behaviours but also offer suggestions on

encouraging positive responses from the students. For example, when the students were asked to create their own pictographic characters, one of the classroom teacher advised the teacher-researcher to provide more guidance and structure and offer a model to students. During the observation in this school, the teacher-researcher found that all the classroom teachers were very supportive of the Mandarin class. They all have particular methods for managing their students, which is convenient for the teacher-researcher.

Second, it is very important to improve engagement from three dimensions in RPS's Mandarin classes. Through the observations in 2019, the teacher-researcher noticed that some traditional teaching methods did not successfully engage students in the class. When teaching them how to pronounce, both of the two ROSETE 11 Mandarin teachers asked students to 'read after me'. That is, the teachers pronounced the Chinese word, then students repeated. Even though most of the students engaged behaviourally, they did not show any emotional or cognitive engagement, as they remembered nothing after the class. Further, the common method for former ROSETE volunteers to conduct Hanzi writing was that teachers presented the Chinese characters on a PowerPoint presentation, then students practised by themselves. However, students just wrote Hanzi according to their thoughts and habits instead of regarding the specific correct order contained in Hanzi. This Hanzi teaching method did not build connections between students' existing knowledge and new knowledge. What was needed was to apply a new Hanzi pedagogy that could combine Chinese characters with their thinking mode and suits Western Sydney primary students. Accordingly, Moloney and Xu (2016) posited that to successfully merge with the Western school context, teachers of Mandarin should understand students' character, learn the domestic culture and observe common pedagogies used by local teachers that effectively engage students. While most of the ROSETE volunteers are inexperienced, their task is to explore effective methods that work well for students. This is also what Singh and Han (2014) proposed—first, the volunteers should perceive the existing similarities between English and Chinese, and then build a curriculum that fits with the local Australian students to promote their learning of Chinese.

Third, as already mentioned, the teacher-researcher spent one term (October–December 2019) observing the Mandarin class in this school. During the Chinese club, the teacher-researcher randomly introduced several pictographic characters to some students in the fifth week in Term 4. At the end of the term, the teacher-researcher asked them which Hanzi

they still remembered. Then a boy and a girl both wrote ‘日’ (sun) and ‘目’ (eye) on the whiteboard. They even drew a sun and an eye to show how they remembered. Surprised, the teacher-researcher asked, ‘So the only words you have remembered are the two pictographic characters?’ ‘Yes, and I think I will never forget them’, the girl answered. This inferred that young students are always imaginative and generally fond of drawing, so teaching Hanzi using a photographic model may work on primary school students. Thus, it is appropriate to link the pictures to Hanzi for younger students at primary school. For all of the reasons above, the RPS is the selected site in this research.

3.4.2 Participants

As school-based research, three types of participants are included in this research. First, three teachers using the anonymised names Amy, Mary and Jean to avoid identification¹ are the interviewees of this research. All of them are primary school teachers in NSW. They are knowledgeable (see Table 3.2) and very supportive of this research.

- 1) Amy is the classroom teacher of the targeted class. Before she came to RPS, she had worked in the Department of Education for 10 years. She is a part-time teacher who has been teaching for eight years, with four years in Stage 1 teaching many subjects, including maths, English, history and geography.
- 2) Maria is the teacher-researcher’s mentor teacher and the associate principal at RPS. She has been teaching at RPS for seven years, with three years in Stage 1.
- 3) Jean is a teacher from the Chinese association in NSW. She is a Chinese language teacher with a Chinese background in a public primary school in Sydney. Most of the students she has been teaching are Chinese background students.

Table 3.2 Participants of this research

	Participant	Educational attainment	Characteristics relevant to research aims
1	Amy	Bachelor of Education in primary	Classroom teacher; 3 years of experience in observing Mandarin class
2	Maria	Bachelor of Education in primary	Associate principal; 3 years of experience in observing Mandarin class
3	Jean	Bachelor of Education in primary	Professional Chinese language teacher; 13 years of experience in teaching Mandarin in Sydney

¹ This study was approved by the WSU Human Research Ethics Committee; the approved protocol is H13727.

Second, the teacher-researcher herself is also a participant in this research. She is the only person engaged in this research from the start to the end, including each lesson design, data collection and data analysis.

Third, the students in the selected Stage 1 class are also among the participants. There were 22 students in total, with 13 students in Year 2 and nine students in Year 1. They come from a variety of cultural backgrounds. Almost 64% of students in this class have an Asian background, including the Philippines, Afghanistan, Iran, Indonesian, India, Pakistan, China and Korea. Two students are identified as having special needs. It should be noted that none of the students had prior experience of script languages before.

3.5 Data Collection Methods

The process of collecting data accumulates information that offers both direct and indirect evidence for the research questions. In this research, data was generated during interviews with three teachers and the process of writing a reflective journal. All the selected data collection methods are relative to the research questions. Four data collection methods were employed to gather evidence to show the consequences of the research questions: a focus group, observations, journals and formative assessments.

3.5.1 Interview

Interviews are the major data collection method in this qualitative research. In qualitative research, interviews can be used to collect detailed data from participants and they are the most commonly employed data collection method (Bryman, as cited in Creswell & Guetterman, 2019). In-depth information can be attained by asking specific questions (Richards, as cited in Creswell & Guetterman, 2019). Interviews are a purposeful interaction in which the interviewer obtains information from interviewees (Gay et al., 2009). Interviews can be conducted with individuals or groups. Since this research's participants only include three primary public school teachers, one-on-one interviews were undertaken.

Semi-structured interview

Mertler (2020) proposed that interviews can be classified as structured, semi-structured and open-ended. In a semi-structured interview, the teacher-researcher refers to a list of prepared questions, and the interviewee has considerable room to respond (Bryman, 2016).

Mertler (2020) also asserted that semi-structured interviews allow the teacher-researcher to follow up ‘a given response with alternative, optional questions, depending on the situation’ (p. 134). Because this research asked participants about their opinions regarding student engagement and lesson plans and the teacher-researcher also engaged in the discussion, semi-structured interviews are the most appropriate interview type.

Online interview

Online interviews were also adopted in this research. Changes made by the NSW Department of Education in response to the COVID-19 pandemic significantly impacted the current research. The decision not to have volunteer teachers in schools from March to July 2020 meant that online interviews were the best choice. Online interviews meant the researcher could have both audio and visual communication with the participants. The researcher could ask questions and record the communication at the same time (Creswell & Guetterman, 2019). Johnson and Christensen (2020) list some advantages of online interviews, including 1) anyone can participate as long as they have access to the internet, 2) rapport still can be established because the camera allows both to see each other, and 3) recording is available throughout the interview sessions. Online interviews can be divided into email interviews and video interviews. In this research, both email interviews and video interviews were chosen.

Email can be used as a computer-media communication tool for interviewing by instant messaging. As highlighted by Creswell and Guetterman (2019), ‘E-mail interviews consist of collecting open-ended data through interviews with individuals using e-mail’ (p. 220). There are multiple advantages of email interviews, including giving the interviewee room to provide detailed feedback. It also offers the classroom teacher scope to inform the teacher-researcher in some aspects they may not have considered after checking the lesson plan concretely. In this research, the teacher-researcher sent her lesson plans to the three participants via an email in which open-ended questions were proposed. The three teachers gave their feedback by replying to the original email.

One of the disadvantages of email interviews is the inconvenience for an ongoing conversation; therefore, video interviews were also adopted in this research. Video interviews offer an easier way for the teacher-researcher to check if she has correctly understood what was said in email reply. Zoom is a popular application; its free online service facilitates audio and video communications. As Boudah (2020) noted, Zoom has

many functions, including virtual collaboration, online meetings and online training. Both interviewers and interviewees can share files and screens with each other (Boudah, 2020; Johnson & Christensen, 2020). Therefore, it can be useful for researchers to conduct audio or video interviews online. After participants replied through email, the teacher-researcher appointed a Zoom meeting with them individually for further discussion.

To receive instant feedback from the three participants, both email interviews and video interviews were conducted according to the participants' schedules (see Table 3.3).

Table 3.3 Interview time of each participant

Amy			
30 June	1st Email interview	1 July	1st Video interview
6 July	2nd Email interview	7 July	2nd Video interview
14 July	3rd Email interview	15 July	3rd Video interview
21 July	4th Email interview	22 July	4th Video interview
23 September	5th Email interview	24 September	5th Video interview
Maria			
23 June	1st Email interview	24 June	1st Video interview
30 June	2nd Email interview	1 July	2nd Video interview
6 July	3rd Email interview	7 July	3rd Video interview
28 July	4th Email interview	29 July	4th Video interview
1 October	5th Email interview	2 October	5th Video interview
Jean			
13 July	1st Email interview	14 July	1st Video interview
16 July	2nd Email interview	17 July	2nd Video interview
21 July	3rd Email interview	22 July	3rd Video interview
11 August	4th Email interview	12 August	4th Video interview
18 August	5th Email interview	19 August	5th Video interview

3.5.2 Reflective journal

A reflective journal by the teacher-researcher was the second data collection method in this

case study. Tomal (2010) stated that ‘journals can be very useful in observing and making a concrete analysis’ (p. 43). Although reflective journal writing can be time-consuming, it provides the opportunity for the researcher to record specific details. Therefore, it is a first-hand account of what happened in the classroom. As required by the ROSETE program manager, all teacher-researchers needed to participate in a workshop each Friday. At that time, they shared their reflective journals and reported on questions that needed to be addressed. The teacher-researcher’s reflective journal contained two parts. In the first part, it recorded how the teacher-researcher apply the schema theory to complete the unit of work. In the second part, the teacher-researcher wrote down all the details after each Mandarin lesson, which included students’ engagement and the advantages and disadvantages of each lesson plan. The third part documented reflections after each interview with the three teachers. All the reflective notes recorded were used as data in this research.

3.5.3 Formative assessment

Formative assessment was the third data collection method in this research. Assessment plays a significant role in teaching and learning. According to Richards (2017), formative assessment and summative assessment are the main types of evaluation in school. Januševa and Jurukovska (2016) contended that ‘formative assessment provides information for student’s achievements’ (p. 55). Research has shown that conducting formative assessments will improve students’ final academic results (Tanck et al., as cited in Palmen et al., 2015). In the current research, student’s achievements can be closely linked to their classroom engagement. For this reason, formative assessment was used to collect data from students. The first one was an exit slip about identifying a particular Chinese character; the second was a practice worksheet containing a matching game and writing Hanzhi on the line; and the third was an activity for students to create their own pictographic characters. Data from formative assessments helped to answer the third research question, *How will Stage 1 students engage in the Mandarin lesson when applying the unit of work?*

3.5.4 Post-it notes

Asking students to provide feedback or reflections through post-it notes was the fourth data collection method in this case study. Since encouraging Stage 1 children to be reflective learners is indeed a big challenge, the teacher-researcher decided to use post-it notes, inspired by Munns and Woodward (2006), who applied this method in a Stage 2 classroom.

In this research, all of the students were given several post-it notes on which to provide feedback. The teacher-researcher offered a range of probes to scaffold their reflections, including the following headings:

What I learnt.

What I liked.

What I didn't like.

What I want to know.

What the easy parts are.

What the tricky parts are. (Munns & Woodward, 2006)

Students whose parents delivered the consent form were distributed different coloured post-it notes than other students. Subsequently, these post-it notes were collected and placed on a chart under the same heading for data analysis. This method has also proven beneficial to students, as they can take this opportunity to learn how to reflect on their learning (Munns et al., 2005).

3.5.5 Focus group

The focus group was the fifth data collection method. A focus group refers to a group of people (normally ranging from four to 12 people) who discuss a certain topic at the same time within a supportive environment. The group is led by an interviewer who inspires discussion and expression of different opinions (Marshall & Rossman, 2016). In this study, the teacher-researcher was the interviewer, and the students the interviewees. Participants of this focus group were six students whose parents had provided consent.

There were three main reasons for adopting the focus group method. According to Firth (2019), the main advantages of focus groups are listed as follows. First, the efficiency in the focus group is higher than in the individual interview. There is no need to conduct a meeting with several people since all participants can discuss the topic at the same time. Second, the focus group offers the possibility to stimulate others' opinions. This point is supported by Lúcio (2015), who asserted that 'what truly distinguishes focus groups from other group data collection methods is the discussion aspect—namely, what emerges from the interaction between individuals and the expression of their ideas' (p. 171). This means interaction among all the participants creates a more talkative atmosphere, so the data is richer in a focus group. Third, it provides a more natural and comfortable environment (Mertler, 2020). Marshall and Rossman (2016) noted that participants in a focus group are

supposed to be strangers. However, Stage 1 students may not be willing to talk about their personal feelings with someone unfamiliar. They may be able to present more real thoughts in a group with their classmates. The interviewees may feel safer, more secure and at ease if they are with their peers. As stated by Wellington (2015), students ‘are also more likely to relax, “warm-up” and jog each other’s memories and thoughts’ (p. 81). Therefore, the focus group is considered an appropriate way to collect data in this research.

The focus group occurred at the end of the sixth lesson. As all interviewees were from Stage 1, special issues and modifications were made in the interview format. First, both the number of participants and the length of time were decreased. The size of this focus group was six participants, and the time was approximately 45 minutes (Vaughn et al., 1996). Second, it is important to choose an appropriate size room before interviewing children (Vaughn et al., 1996). Young students might feel anxious about a strange person and a new environment. The teacher-researcher decided to conduct the focus group in the classroom used for the Chinese club, and in accordance with their classroom habits, the students could choose to sit in a circle on the floor. Third, to get relatively genuine answers, it was important to make children feel at ease (Vaughn et al., 1996). The teacher-researcher informed them that their responses were not being evaluated, and the aim of the discussion was for their Mandarin learning.

According to the size and duration of the focus group, several questions were designed for the student interviews (see Table 3.4) to answer the two contributory research questions:

- 1) What helps Stage 1 students learn Chinese pictographic characters?
- 2) How will Stage 1 students engage in the Mandarin lesson when applying the unit of work?

Table 3.4 Question routine for conducting focus group

Opening questions:
How do you learn Hanzi through a pictographic model?
Key questions:
What is your favourite pictographic character? Why?
What help you remember pictographic characters?
What are the activities/games you like the most in Mandarin class?

What do you find difficult to learn Hanzi? Why? Do you get help? How? From whom?

Although it can be challenging to conduct a focus group among young children, their answers may be more spontaneous than some adults due to their lack of self-consciousness about socially expected responses (Vaughn et al., 1996). As a result, students' thoughts were elicited by discussing them together with their classmates. The focus group was audio-recorded and later transcribed by the teacher-researcher for content analysis.

In conclusion, a range of mechanisms were employed to collect data to answer each research question (see Table 3.5).

Table 3.5 Research questions and data collection method

	Interview	Reflective journal	Formative assessment	Students' feedback	Focus group
RQ1	√	√			
RQ2	√	√			
RQ3		√	√	√	√

3.6 Data Analysis

The process of analysing data gives meaning to the original data, which plays a vital role in the whole case study. Since qualitative research is situated in real life and natural circumstances, the amount of data tends to be abundant. Therefore, choosing an appropriate method of data analysis is crucial. According to Creswell and Guetterman (2019), there are several stages involved in data analysis in qualitative research, which includes 'preparing and organizing the data, exploring and coding the database, describing findings and forming themes, representing and reporting findings, interpreting the meanings of the findings, and validating the accuracy of the findings' (p. 236).

Initially, the data should be well transcribed and organised. Transcribing is a vital task, especially in research that contains interviews (Marshall & Rossman, 2016). All the video records were transformed into written words. The audio recording from the focus group interview and every class was transcribed by computer software. Then, the researcher immersed herself in the data to be fully familiar with it because 'this stage is where you read your first transcript and note down any general themes that you notice' (Norton, 2018, p. 120). The process involves reading and re-reading while making some notes and memos in the margin. In this research, the teacher-researcher read the transcripts of the teacher

interviews and student focus group to make connections among them.

The second stage is to code the data. Specifically, ‘coding is the process of marking segments of data (usually text data) with symbols, descriptive words, or category names’ (Johnson & Christensen, 2019, p. 571). It includes procedures that involves putting the data into categories according to significant themes (Norton, 2018). It can be seen from these two statements that coding aims to make sense of collected data, divide it into segments, find repeated codes and classify those codes to different themes. In this study, the teacher-researcher’s reflective journal and responses from three primary school teachers and students were coded by identifying topics and themes, including overlaps in conversations. The formation of eight codes in this study are listed as follows:

1. Content Appropriate to Student Age
2. Consistent Lesson Structure
3. Game-based Learning
4. Drawing, pictures, engagement
5. Watching YouTube videos
6. Practice writing
7. Exit slip
8. Storytelling

All of them helped to answer the three research questions and were explained detailly in Chapter 4.

Next, all codes were used to build descriptions and categories. In this stage, data were examined in detail to account for what it demonstrates, which helps to answer the research questions and develops a deeper understanding of the research outcome. The descriptions and categories became a catalogue of codes, consisting of different topics which were discussed in the following data analysis chapters.

The next stage was presenting and reporting findings. That means explanations were constructed to state what was found in response to the research questions, and figures were

adopted to show connections among themes. As Creswell and Guetterman (2019) proposed, ‘the primary form for representing and reporting findings in qualitative research is a narrative discussion’ (p. 257). The research findings (see chapter 5) were summarised in detail into a written text where the researcher concludes the findings from the analysis of data. In this research, chapter 4 illustrated findings from the teacher interviews, including their suggestions on the unit of work and several effective approaches with young children. This answered the main research question and the second contributory research question. Chapter 5 discussed the codes or strategies the teacher-researcher applied in the former six lessons and how they impacted student engagement. This helped to answer the main research question and the second contributory research question.

The fifth stage is interpreting the findings. ‘Qualitative research is interpretive research and you will need to make sense of the findings’ (Creswell & Guetterman, 2019, p.259); therefore, the researcher needs to put all the interpretations in the final section of the study. Possible limitations and suggestions should also be listed for future research. Chapter 6 reviewed the main content of Chapters 1–5 and then illustrated the study’s key findings by answering the three research questions. Lastly, it pointed out the limitations of this study and recommendations for further research.

3.7 Research Principles

3.7.1 Ethical considerations

Importantly, ‘researchers, regardless of the type of the research they are conducting, should always be concerned with protecting their subjects and avoiding legal problems’ (Tomal, 2010, p. 32). Therefore, ethical issues are a crucial aspect of conducting research. Strictly following ethical procedures, this research did not commence until the author obtained formal consent from students, parents, the classroom teacher and school principal, and the Human Research Ethics Applications and the State Education Research Approval Application Form were approved (See Appendix A for the timeline).

Written information about the aims and processes of the study informed all the participants to ensure they were willing to contribute to the research. The written consent documents include statements indicating that:

- people have the right to refuse to participate

- they may withdraw from the study at any time
- data related to their participation will be returned to them
- any information (data) will be stored safely so that it cannot be viewed by others
- none of the information that identifies them will be made public or revealed to others without explicit and written consent (Stringer, 2013, p. 89).

In addition, the researcher must protect the confidentiality of the participants and the collected data, as ‘respecting the privacy of research participants is at the heart of the conduct of ethical research’ (Johnson & Christensen, 2019, p. 139). Anonymity is an appropriate way for the researcher to protect privacy. Therefore, all the names of students, teachers and the school were anonymised.

3.7.2 Validity and reliability

Validity and reliability are the two most significant criterion for examining the findings in quantitative research (Heale & Twycross, 2015). Although not all researchers apply these two terms in qualitative research, Patton (2002) claimed that these two issues should be highlighted by all qualitative researchers when doing research designs. Further, Oluwatayo (2012) contended that validity and reliability can be used in qualitative educational research. In this case study, two factors were addressed as follows.

When it comes to validity in qualitative research, it always refers to research that is ‘plausible, credible, trustworthy, and therefore defensible’ (Johnson & Christensen, 2019, p. 298). Patton (2002) considered reliability to be the consequence of validity in a research project. Golafshani (2003) asserted that ‘to ensure reliability and validity in qualitative research, examination of trustworthiness is crucial’ (p. 601). A common method to ensure trustworthiness in qualitative research is triangulation, which can be defined as ‘a validation approach using multiple investigators, methods, data sources, and/or theoretical perspectives in the search for convergence of results’ (Johnson & Christensen, 2019, p. 298). Therefore, data from different sources allow the teacher-researcher to explore and identify the meaning behind the perceived phenomenon (Stake, as cited in Stringer, 2007). The teacher-researcher utilised two types of triangulation to carry out this case study. First, fruitful data were collected from multiple methods, including interviews, reflective journal, formative assessment, post-it note questions and a focus group. Second, the teacher-researcher gathered data from three groups of people, including three teachers in Sydney public

schools, students from a Stage 1 class in RPS, and the teacher-researcher herself.

Chapter 4: Findings from Teacher Interviews

4.0 Introduction

This chapter answers the first contributory research question: *What will help students learn pictographic characters?* The chapter includes a list of items for designing a unit of work for the age group (in content and strategies, see Appendices). Three teachers gave feedback about the structure of the lessons, which include game-based learning, drawing pictures, watching videos and writing Hanzi. Following the interviews with three teachers, the teacher-researcher coded the data and grouped some recurring topics into categories (see Table 4.1). The findings were related to which effective strategies could be applied in Western Sydney Mandarin classes with Stage 1 students.

Table 4.1 Demonstrating development of codes

Code	Description	Sample quote
Age-appropriate content	This code indicated that teachers need to choose appropriate amount of teaching contents according to students' age.	I would say one character a lesson because of the formation of Hanzi is so detailed. It takes time to know how to write them.
		I looked at your students' language background before. I think majority are non-Chinese background students, right? I think it should be okay even though just one or two characters.
Consistent lesson structure	Using such a consistent structure can create a more comfortable learning environment for students.	Consistency in each of your lessons is good. I can see each week is the same but just a little bit different. Simple, consistent and foreseeable lesson structure really works well with children.
		These lessons develop the sequence of learning as they follow a similar routine to previous lessons. Developing strong and consistent classroom routines makes a comfortable learning environment where students can more easily learn new content.
Game-based learning	Through participating in games, students' memory can be reinforced. In addition, games can generate excitement and a sense of competition or cooperation of the students.	I think I will suggest like having some kind of games where they match the English word written, the picture of the real mountain and the pictographic characters. If you had a matching game or something that would be quite engaging for the students.
Drawing, pictures, engagement	What the teacher mentioned addressed the schema theory. The connection between students' native language and objects is their original schema. After learning the shape and meaning of Hanzi through the pictographic model, students can develop	I suggest that you can ask students to draw a picture first. Because for example, the word 山 (mountain) is kind of image really connect to the real life. I believe that the connection and information will really engage students cognitively.

	<p>their new schemas about Chinese pictographic characters and objects. Therefore, drawing and presenting pictures are considered to be essential steps to increase student engagement.</p>	
<p>Digital aids to learning: Watching YouTube videos</p>	<p>YouTube videos could be used to help students understand the development of the selected Hanzi and learn the pronunciation.</p>	<p>I will use video. The video shows how the words originate from. That's why I tell them if you look at '云' (cloud), it is not directly linking to the picture. You probably cannot see the picture behind it. But you can see how it has been changed over time through videos.</p> <p>Based on my past observation experience in Mandarin class, I think videos were effective for them to learn the pronunciation. I think that they definitely have been picking it up when they were following the video to repeat.</p>
<p>Practice writing</p>	<p>This code involved modelling, formal writing and informal writing.</p>	<p>For example, rather than writing the word they could make the character with playdough, paint it on a piece of paper, draw it with their finger in a sand tray or write it with chalk outside.</p> <p>I think these activities help students make connections and build a stronger foundation when it comes to writing with a pencil. The hands-on activity with the pasta is an easy way for all students to engage with recognising Chinese characters before and as well as formally writing them. We also do the other part of the lesson - formal writing. But the first part is building the foundation and the connections in their mind to remember the character.</p>
<p>Exit slip</p>	<p>Exit slip can be used to understand student engagement before they leave the class.</p>	<p>Exit slip is something that you can let students show you what have they learned today. Or it could be used to understand their emotional engagement. If they feel happy, they can put their hands on the happy face. It is something like students need to do something before they leave.</p>
<p>Storytelling</p>	<p>Storytelling might be a useful method to improve students' memory.</p>	<p>If I am going to teach them some key words, I will put these words on the board. I will use these words to tell a story, instead of showing the flash card and let them copy it. This might make them forget the vocabulary easily. Given a story according to those words, I think kids will remember them.</p>

4.1 Content Appropriate to Student Age

The first code that emerged from the teachers' data was age-appropriate content. Having considered 1) the learning compacity of young learners, 2) Stage 1 students' past experience of learning Mandarin in RPS, and 3) the teacher-researchers' past experience of learning

English as a second language, the original teaching plan contained 16 new pictographic characters in the whole unit. As shown in Table 2.1, the total number of Chinese pictographic characters related to nature is more than those related to human body parts. Therefore, the teacher-researcher planned to teach 10 Hanzi about natural phenomena and six Hanzi about human body parts (see Table 4.2). All the selected Hanzi came from Table 2.1. As Table 4.3 shows, after students mastered each theme, a review lesson followed. The teacher-researcher planned six lessons on nature and four lessons on human body parts. Students were expected to learn two new characters in each lesson. However, when discussing the teaching plan with Maria, she offered a different opinion:

Interviewer: Every lesson lasts 30minutes, how many characters do you think is appropriate to teach?

Maria: I would say one character a lesson because of the formation of Hanzi is so detailed. It takes time to know how to write them. (First video interview, 24/06/2020)

Maria suggested the teacher-researcher only teach one new Chinese character to students each lesson due to the complex structure and formation of Hanzi, and learners might need a considerable amount of time to master them. Following this advice, the teacher-researcher decided to adjust the teaching objective (see Table 4.3). As mentioned before, there were two themes of Hanzi in the whole unit. The updated teaching plan asked students to learn two new characters in the first lesson of each theme, then only one new character in each subsequent lesson. In addition, they were also asked to review what was taught in the previous lesson. The updated plan was supported by other two participants:

Interviewer: Here is the teaching objective of the whole unit (see Table 4.3). Basically, students will learn one new pictographic character every lesson because they are beginning learners and every lesson lasts only 30 minutes. And they only have one lesson per week. Do you think it is appropriate for Stage 1 students?

Jean: I looked at your students' language background before. I think majority are non-Chinese background students, right? I think it should be okay even though just one or two characters. (First video interview, 12/07/2020)

Amy: I think it is helpful that in one lesson you practiced one character only but then in the next lesson you practiced all taught characters as it allows for repetition and recall [several characters] and explicit instruction [on one character]. (First video interview, 01/07/2020)

Jean felt this plan was reasonable because most of the students are non-Chinese background students. Amy stated that focusing on one new character would be helpful because it leaves sufficient time for students to review former characters. Both teachers contented that the adapted teaching objective is applicable.

Table 4.2 The original teaching objective

Lesson	Teaching Content
Lesson 1	山(mountain)、云(cloud)
Lesson 2	水(water)、火(fire)
Lesson 3	日(sun)、月(moon)
Lesson 4	雨(rain)、雷(thunder)
Lesson 5	土(soil)、田(field)
Lesson 6	Review: 山(mountain)、云(cloud)、水(water)、火(fire)、日(sun)、月(moon)、雨(rain)、雷(thunder)、土(soil)、田(field)
Lesson 7	人(people)、目(eye)
Lesson 8	口(mouth)、身(body)
Lesson 9	手(hand)、心(heart)
Lesson 10	Review: 人(people)、目(eye)、口(mouth)、身(body)、手(hand)、心(heart)

Table 4.3 The adapted teaching objective

Lesson	Teaching Content
Lesson 1	山(mountain)、云(cloud)
Lesson 2	山(mountain)、云(cloud)、水(water)
Lesson 3	水(water)、雨(rain)
Lesson 4	雨(rain)、日(sun)
Lesson 5	日(sun)、月(moon)
Lesson 6	山(mountain)、云(cloud)、水(water)、雨(rain) 日(sun)、月(moon)
Lesson 7	人(people)、目(eye)
Lesson 8	人(people)、目(eye)、口(mouth)
Lesson 9	口(mouth)、手(hand)
Lesson 10	人(people)、目(eye)、口(mouth)、手(hand)

4.2 Consistent Lesson Structure

The second code that emerged from the teachers' data was consistency. For example, all of the participants mentioned the importance of consistent lesson structure in the one-to-one interviews. This addressed what was noted in Chapter 2, that consistency is important in

teaching with young children.

Interviewer: What do you think are the good parts of my lesson plans?

Amy: I think you've got like one, two, three, four steps in your lesson plan, that are good breaks. It breaks each step down. Students will master the rhythm after several lessons. Consistency in each of your lessons is good. I can see each week is the same but just a little bit different. Simple, consistent and foreseeable lesson structure really works well with children. (First video interview, 07/07/2020)

Maria: I think especially for the younger children, it's really good for them to know what to expect and know what they need to do. It's the benefit of the students if they know the process of how to do it even though they are learning something new. I also think that's a great benefit for their self-confidence. As far as self-awareness, like it's knowing what's expected of them. It's kind of if children know what is expected of them in the classroom, if the learning is consistent or the program is consistent, then they can be more confident in the classroom. (Second video interview, 07/07/2020)

Jean: These lessons develop the sequence of learning as they follow a similar routine to previous lessons. Developing strong and consistent classroom routines makes a comfortable learning environment where students can more easily learn new content. (Third email interview, 21/07/2020)

This is similar to Badley's (2019) opinion, highlighting that students can find predictability in a repetitive classroom structure. Maria believed that students need consistency to be successful in their learning because it benefits them in terms of self-awareness and self-confidence. From her perspective, self-awareness is children knowing what is expected of them in the classroom. Meanwhile, students are confident when they know what to expect. Therefore, she suggested that when settled in an ordered environment, students have more confidence to achieve success in learning. Jean identified lesson plans in this unit following a similar structure. She believed that using such a consistent structure could create a more comfortable learning environment for students, and offered more concrete opinions:

Jean: From my perspective, if we use the similar structure each week, kids will get bored. Even though there is new word they are going to learn in each lesson, it is still the similar structure. As a teacher, we have to find different ways to teach them. Some kids probably say it's fine. But some kids, for those who quite smart or some have low abilities, they will find they are doing a similar thing. Probably it is okay for the first two lesson. But by the 5th or 6th lessons, they probably start to feel bored. Based on

my teaching experience, if we do the similar stuff or the similar sequence for the following weeks, kids feel bored and they'll come to complain. If kids are bored in the teacher's class, it indicates they want something different. I think as a teacher, when we teach the unit of work, we really need to think about different ways to engage them. I'll put myself in the student's position, then I would feel that I wish the teacher can give us some surprise when we learn another new character today. I usually like to give kids a surprise. I will tell them the learning goal at the beginning of the term. But every week I'd like to give a surprise to them. (First video interview, 14/07/2020)

Jean had a strong desire to create surprising educational experiences for students. Her opinion on class structure indicated that some students might get bored with a repetitive structure even when they learn new words. This might directly cause students to disengage emotionally, which is a strong signal that the teacher needs to be creative in designing each teaching step. Jean suggested that to engage students in the long run, teachers always need to give them something 'fresh'. The teacher-researcher concluded that keeping the major routines consistent but having different methods to engage students in each step might be conducive to students' learning. Therefore, she adapted the structure of the lesson plans slightly. Basically, the overall structure of every lesson can be divided into four parts: 1) review, 2) draw pictures, 3) watch videos, and 4) practice writing.

4.3 Game-based Learning

The third code that emerged from the teachers' interview was game-based learning. According to NSW Chinese syllabus, Stage 1 students should participate in 'play-based learning activities in Chinese' (NESA, 2017, p.1). Using games was also mentioned by three participants:

Interviewer: What kind of activities do you think that can increase their behavioural engagement?

Maria: I think that if you had some sort of games in your PowerPoint will definitely increase their behavioural engagement. You could say you could put up a character like that's not the correct one. And say is this the character for mountain? It is not a test, but like almost like a matching game at the end. And you could add to it each week. So your first week is mountain and then your next week is cloud, then the next week is water. So you could say which character is this one? Here is this one for mountain, water or cloud. Then the next week you could add to it. (First video

interview, 24/06/2020)

Amy: I think I will suggest like having some kind of games where they match the English word written, the picture of the real mountain and the pictographic characters. If you had a matching game or something that would be quite engaging for the students. (First video interview, 07/07/2020)

Jean: I looked at your students' language background before. I think majority are non-Chinese background students, right? I think it would be fine as long as the lesson includes games. Games and activities, I mean a broad variety of strategies. Games always make students feel excited especially when they compete or cooperate with each other. And it should be okay even though just one or two words. (First video interview, 14/07/2020)

Through interviewees' data, it can be concluded that games are easy to arouse students' engagement behaviourally, emotionally and cognitively. Two participants, Jean and Maria, stressed the importance of games based on their past teaching experience. They indicated that through participating in games, students' memory could be reinforced. Jean expressed that games can generate excitement and a sense of competition or cooperation among the students. She mentioned 'variety' here again, which indicated that teachers should be creative enough to apply different games for students.

The teacher participants also provided suggestions on what kind of games cater to students' interest. The following is an example of game offered by Jean:

Jean: For example, we have a game called 'Can you read my mind?'. You can tell students that you are going to test them how many words can they write. You can write down a word on your whiteboard. You give students several options and let them to write one of them on their whiteboard. Then some kids will write the same word as you. They will feel excited in this case. They will shout very loudly. Some kids might write other words, but it does not matter. It is just like a small test and you will know that they can write at least one word. (Second video interview, 17/07/2020)

The teacher-researcher adopted this game in the unit of work because it could increase student emotional engagement, and the teacher-researcher could also use observational skills to learn who can write well and who fails to write any word.

In addition, Maria stated that it is very significant to revise after students learn new knowledge:

Maria: I suggest that you can keep the revision parts in every lesson. Prior learning is reviewed at the start of each lesson which prepares students for new content in the current lesson. (Third email interview, 06/07/2020)

In light of the above two factors, the teacher-researcher planned to use game-based learning to engage students in revision. Revision activities in this whole unit include games such as ‘are you thinking of my thinking?’ and ‘swat a fly’. In this whole unit, there were eight lessons that have a reviewing segment, with eight different games (see Table 4.4).

Table 4.4 Games in the whole unit

1. Passing the doll
Material: Song; Doll
Process: All students sit in a circle. They need to pass the doll when background music continues. Once it stops, the student who holds the doll should write the character asked by the teacher.
2.Can you read my mind?
Material: Whiteboard; Marker
Process: First, the teacher lists several Chinese characters on the PowerPoint and write one of them on the little whiteboard. Second, the teacher asks students to write one of them on their own whiteboard. Third, check which students write the same character as the teacher.
3. 60 seconds dash
Material: Whiteboard; Marker
Process: Students write the same character in one minute. The students who wrote the most characters will be the winner.
4. Swat a fly
Material: Bat; Marker
Process: Write down several characters on the board. Just pretend these characters are flying. Invite two children to come to the board at one time. When one student pronounces a character, another needs to use a badminton racquet to swat it. Or have kids sitting on the floor and they say the character or even say English, and the chosen students need to find the Chinese character and swat it.
5. Write on someone’s back
Material:/
Process: All students sit in a circle. Teacher instructs them to use their fingers to characters on other students’ back.
6. Write with pasta
Material: Pasta
Process: Students use pasta to set up characters.
7. Write with string
Material: String
Process: Students use string to set up characters.
8. Rainbow writing
Material: Colourful crayons; Paper
Process: Students use seven crayons in different colours to write the same character seven times. This is a repetition strategy, which also adds some fun to writing.

4.4 Drawing and Presenting Pictures

4.4.1 Drawing

The fourth code that emerged from the teachers' interview was drawing pictures. Because pictographic characters developed from pictures, drawing is considered an essential step in the learning process. Before learning how to pronounce and write the targeted Hanzi, students were asked to draw a picture of the Chinese character. For example, in the second lesson, before students learn to write '水' (water), they will be encouraged to draw a picture of water (see Table 4.5).

Table 4.5 One of the learning step—drawing

Time guide	Content: What is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
5min	Students draw water	Instruct students to draw the water; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge

The first reason why drawing is an indispensable step in this learning is it might increase students' emotional engagement. According to Chang (2012), the use of drawing to support Stage 1 students' acquisition of a second language might invigorate the classroom atmosphere, which may support students being engaged emotionally. This is also supported by Maria's arguments:

Maria: I think you should get them to draw a picture of a mountain themselves or a picture of water themselves. That makes sense because Stage 1 students enjoy drawing very much. It will do good to their affective engagement. (First video interview, 24/06/2020)

The second reason is that drawing also helps to increase cognitive engagement:

Maria: I think drawing the pictures first will arouse their cognitive engagement. Especially for year one, they are very used to drawing pictures and linking those types of things. Pictures with writing, that's on Stage 1 level. (First video interview, 24/06/2020)

Jean: I suggest that you can ask students to draw a picture first. Because for example, the word 山(mountain) is kind of image really connect to the real life. I believe that

the connection and information will really engage students cognitively. I think it is a really good topic for you to do research. (First video interview, 14/07/2020)

Maria regarded drawing as a proper activity to engage students cognitively because it is a common method for younger learners to build connections between pictures, words and concepts. Jean also contended that drawing the picture before writing the specific Hanzi would engage students cognitively due to the clear connection between the image and the character. These participant responses are in line with the previous findings. Gidoni and Rajuan's (2018) research indicated that drawing tasks play a positive role in learning a foreign language among pupils. They asserted that drawing is a creative activity for children, which helps to increase motivation and participation.

The third reason for applying drawing in Stage 1 Mandarin classes is that it is consistent with the schema theory. As discussed in Section 2.1, schema theory talks about building new knowledge on existing knowledge. When children start to learn new contents, they tend to learn quickly with a familiar beginning. Research conducted by Kuo and Hooper (2004) found that the effectiveness of using visual images to represent abstract Chinese characters may be impacted by learners' prior knowledge. Students know how to draw pictures of the targeted Hanzi, which represents their original knowledge. After the teacher demonstrated the link between the picture and the specific pictographic character, students then mastered how to write the Chinese character. This was how they gained new knowledge from their prior knowledge. It was also supported by Amy's arguments:

Amy: Always in a writing lesson for Kindy or Stage 1, they usually have to draw a picture to match what they've written. Looking through your lesson plan, I think that you're showing what they know already and then you're building on what they already know. (First video interview, 07/07/2020)

She stressed that asking students to draw pictures first is a method to remind them what they have already learned. Teaching them how to write can build on their existing knowledge.

However, the teacher-researcher was concerned about students perceiving the lesson as a drawing class rather than a Mandarin class, as they might get distracted by the pictures and spend too much time on this activity. Nonetheless, two participants did not share this concern:

Interviewer: Do you think there is a possibility that the focus of learning by children might be distracted from the character itself to this picture?

Amy: They will draw the picture, right? And then they will pronounce the words and engage in written work. I don't think it would distract from it if you have all three things together. (First video interview, 07/07/2020)

Maria: I don't think they will consider it to be a drawing class. You don't need to necessarily separate drawing and writing. You could probably say that's the whole activity. As long as they do both of those things within the time frame, then that's okay. Tell them how long they have to do it.

Interviewer: Okay. Do you mean students need to understand that this is a whole activity?

Maria: Yeah. Because otherwise, you're right, they might think we just draw pictures. But they need to know that they're drawing the picture because it matches the character. (Third video interview, 07/07/2020)

Amy stated that successive steps link the Mandarin lesson as a whole. Meanwhile, Maria emphasised that each part's time frame is key to students' recognition. She suggested the teacher-researcher guide students to finish each activity within the specific time. This suggestion helps ensure students have time to learn how to write the specific pictographic characters by the end of each lesson. They need to do revision, drawing, watching videos and handwriting within the time frame. Although drawing and writing are regarded as two steps in teaching plans, students should be instructed to see them as a whole in real lessons. In conclusion, both participants indicated that as long as students are aware that drawing is aimed at understanding the connection between picture and Hanzi, their focus will not be transferred.

4.4.2 Pictures as visual materials

As mentioned in Section 2.3.4, applying visual aids is an important approach when working with young learners. Three participants also highlighted the importance of using visual materials:

Amy: I believe visual aids can help students. Learning with the visuals is much better than you just standing in front of them and talking. They are not going to be interested. But when you've got some visual aids, they've got something to look at and think about your words and all the visual materials work together for their understanding.

(Second email interview, 06/07/2020)

Maria: We always use visuals to engage with our lower learners and our non-English speaking students. Because it's too much for them to just hear us talking. They need something to help them remember or help them understand in their own way of what we're talking about. (Third video interview, 07/07/2020)

Jean: I think the best part of your lesson plan is that there are always some visual medias following your teaching plans. Because I believe visual aids will continue to support students learning of these new concepts. (Third video interview, 22/07/2020)

As the interview illustrated, teachers suggested that visual aids can be strong support for visual learners. They indicated that a visual learner is a student who learns and understands new concepts by sight. This might be because younger students prefer to use visual stimulation to absorb and process information rather than listening only. Visual materials can be in many forms, such as graphs, charts, maps and diagrams. In this unit, visual materials mainly refer to pictures and videos.

Pictures were used as static visual materials in this unit. They appeared in the PowerPoint presentation when the teacher-researcher demonstrated the connections between images and characters. They were also applied when the teacher-researcher introduced new words or helped students to consolidate understanding of the targeted Hanzi. Pictures could facilitate students to understand the meaning of the Chinese pictographic characters. They were beneficial for students to pick up what was being taught. Amy shared a similar opinion during the interview:

Amy: I would say your PowerPoint presentation is a perfect visual aid. I think it helps children because they are visual learners and they need to see pictures to remember the meaning. For students, I think seeing pictures is easier than just listening. (Second video interview, 07/07/2020)

In addition, Maria suggested putting the image and the specific Hanzi on the same slide so it could reinforce students' memory:

Maria: I think students need to make that relationship between the image and Hanzi. They need to see the actual picture as you've already done in your PowerPoint. I just thought maybe side by side would give it a little bit more. (Third video interview, 07/07/2020)

Originally, the teacher-researcher presented each Hanzi and picture separately on each PowerPoint slide. Following Maria's suggestion, she put the Hanzi and the picture on the same slide (see Figure 4.1). In this way, students may have a deeper impression of the meaning in Hanzi.

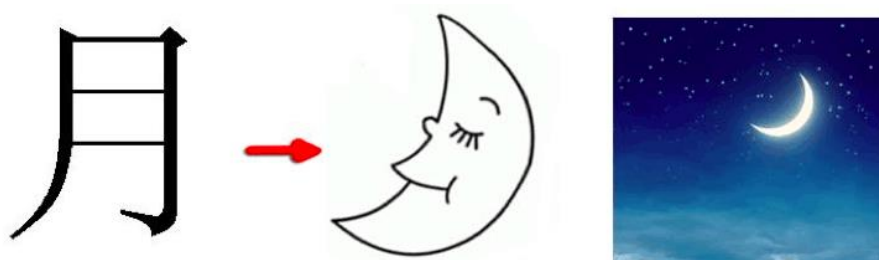


Figure 4.1 The Hanzi and picture of the moon

Pictures could also be a significant factor in improving students' engagement. First, presenting pictures helped students to engage behaviourally. Possibly, students would only engage auditorily without visual aids. However, Maria expressed that when students had materials to look at, they began to engage visually:

Maria: The PowerPoint uses visuals to remind students. You have the character up on the board. Like that is still a visual for them. You're not just saying to them, 'I want you to do this. Go and do this. Go and do that'. Like you've got something up on the board to remind them what they need to learn and remember. They definitely engage better visually through it. (Second video interview, 07/07/2020)

Second, having pictures in PowerPoint might be beneficial to students' emotional engagement:

Jean: Another advantage is that pictures will do good to their emotional engagement. Kids like to learn with pictures because they feel boring if the teacher only presenting words in a language lesson. In addition, if they come to a classroom and it is blank, they won't like it. We will decorate our classroom with posters or other culture stuffs to make kids feel this is a Chinese class. I believe if Stage 1 students come to a classroom with black and white, it is hard for them to engage. (Fourth video interview, 12/08/2020)

Third, Amy claimed that pictures would prompt cognitive engagement:

Amy: Cognitively, pictures will help them to recall and see a good model of what

they're supposed to be learning about. It is their basis of what they're going to be doing in the lesson. (Second video interview, 07/07/2020)

In conclusion, pictures as visual materials could help students to better memorise the meaning of characters and engage in the Mandarin lesson.

4.5 Digital Aids to Learning: Watching YouTube Videos

When analysing the data, YouTube also appeared as a significant and recurrent code. Engaging and entertaining learning tools have become a necessity in modern classrooms that maintain engagement and motivation among learners (Roodt et al., 2014). In this lesson plan, watching YouTube videos was the third step. Jean addressed that YouTube could be an effective option:

Interviewer: What are your suggestions to improve these two lessons?

Jean: You may think about showing students some YouTube clips. (First email interview, 13/07/2020)

Interviewer: You suggested to use some YouTube clips in our email interview. Do you use YouTube videos in your Mandarin class? Do students enjoy watching videos?

Jean: Yes. I love YouTube so much. Every time I need resources to prepare a new lesson, I go to the YouTube first. I feel it's really a good tool and my class enjoyed watching videos so much. Because you want to improve engagement in this class, I think YouTube can be a useful media. (First video interview, 14/07/2020)

These comments show that YouTube was a priority for Jean to search for resources when planning the lesson and has been given considerable attention in her Mandarin class. She also claimed that YouTube could help engage students by acting as a visual and aural aid, and stressed how they love YouTube videos. These responses indicate that YouTube can help engage students emotionally, which is supported by previous research. Balçikanlı (2010) asserted that YouTube provides infinite resources for language learners, and his research affirmed that students have a positive experience of YouTube videos when they learn second languages. In addition, evidence indicated that learning vocabularies through videos strengthened retention and recognition of their meanings (Arndt & Woore, 2018).

In this regard, YouTube videos have been applied in almost every lesson. They were used to help students understand the development of the selected Hanzi and learn the

pronunciation.

4.5.1 Understanding the development of the selected Hanzi

Revealing the relationship between images and Hanzi was important, as emphasised in the previous section. Therefore, after students drew pictures on their own, they were guided to understand how the picture itself evolved into a Chinese character through YouTube videos. Both Amy and Jean reinforced the importance of revealing the relationship between the picture and Hanzi:

Amy: I think linking the Hanzi and the image may support the students in recalling and creating the pictographs from memory. Having that relationship is really good to make it more understanding because for us, we don't write Hanzi. Looking at those images, we can't see that how they match. Like me, I don't write in that language, I don't know it. But when someone shows you the relationship, I think that's really good that it would make it easier as time goes on. I'll see that links together and I think that would be good. (First video interview, 07/07/2020)

Jean: I think it will be more beneficial for students to see the link between the picture and the Chinese character. I think it is helpful for students to see how it relates together. (First video interview, 14/07/2020)

Amy pointed out that understanding how Chinese pictographic characters developed from images was fairly important for non-Chinese background learners because they do not write this language frequently. Learners cannot directly understand the link without clarification. However, understanding the development and evolution of the characters may help learners to recall their meaning. Jean contended that it was beneficial for students to remember the word-formation because it can link the word to the image.

Maria also agreed that demonstrating the relationship between the picture and character is helpful:

Interviewer: This table (see Table 4.6) shows how Chinese pictographic characters developed from image.

Maria: Cool. Will you show all of these to the students?

Interviewer: Yeah.

Maria: That's really good. Understanding the links between the image itself and the Chinese character. That's pretty cool. (Third interview, 07/07/2020)

Table 4.6 Explanation of selected pictographic characters

This character represents 'mountain.' The horizontal line can be seen as ground, three radical lines indicate three peaks of a mountain.



This character represents 'cloud.'



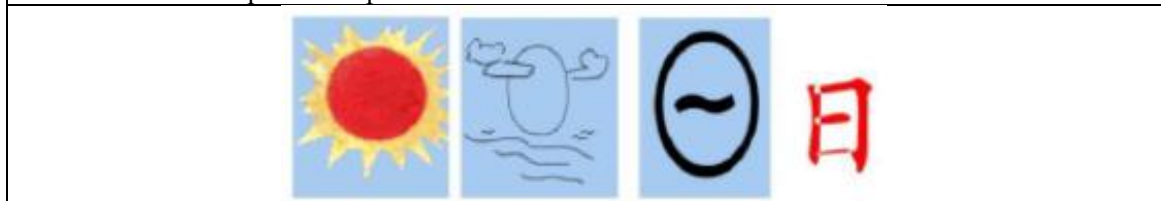
This character represents 'water.' The original pictograph of water depicted a fluid stream of water; it has been adapted to its modern style.



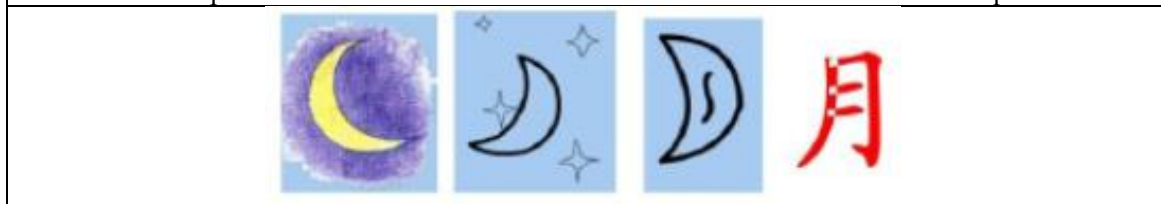
This character represents 'rain.' The top horizontal line indicates the sky. The whole character looks like rain falling from the sky.



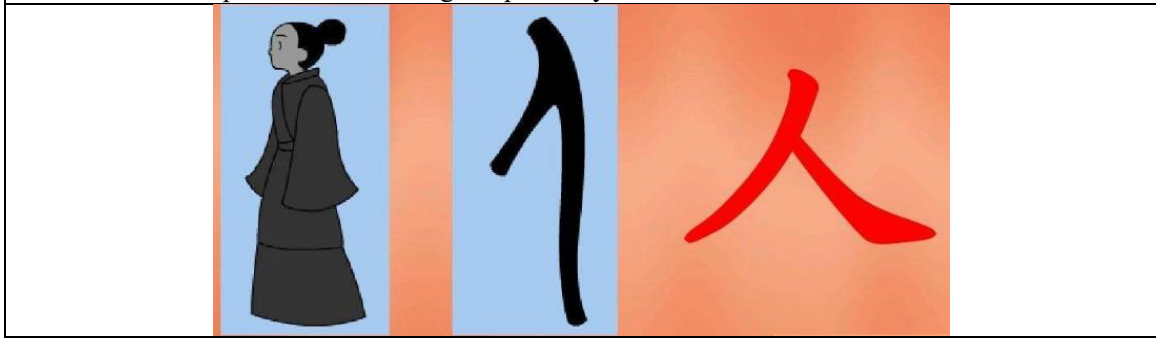
This character represents 'sun.' The rectangle represents the shape of the sun. The short horizontal line in the middle represents a piece of cloud across it.



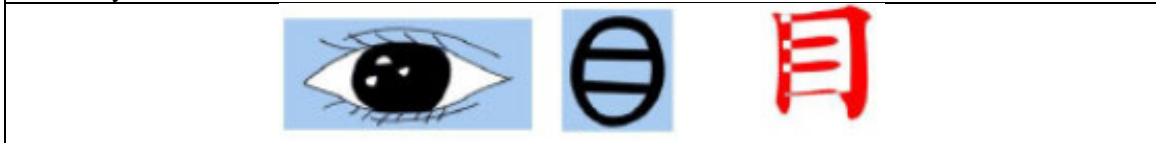
This character represents 'moon.' The whole structure looks like the moon in the first quarter.



This character represents 'people.' Based on the shape of people, the left-falling and the right-falling of the character represent arms and legs respectively.



This character represents 'eye.' It was established in the shape of an eye, which has been turned vertically.



This character represents 'mouth.' It based on a persons' widely open mouth. It was squared off to its modern style.



This character represents 'hand'. Rotate the left hand 90 degrees to the left and you have its basic structure.



In this regard, choosing appropriate videos for Stage 1 students to understand how pictures had been transferred to the written word became an important step. Jean shared her experience in the interview:

Interviewer: When you taught Chinese pictographic characters, especially those partly lost its visual characteristics, take '云' (cloud) as an example, how did you reveal the relationship between the image and the character itself?

Jean: I will use video. The video shows how the words originate from. That's why I tell them if you look at '云' (cloud), it is not directly linking to the picture. You probably cannot see the picture behind it. But you can see how it has been changed over time through videos. (First video interview, 14/07/2020)

As Jean suggested, there is a series of YouTube videos that describes the story of Hanzi (see Appendix D). It introduces 36 Hanzi, including their different forms at different times. These videos gave students a basic understanding of how Chinese pictographic characters were developed from the image itself and how they have changed through time. As all these videos are in Chinese, the teacher-researcher translated them into English when playing them so that non-Chinese background language learners could understand.

4.5.2 Videos as visual materials

In addition to the pictures inserted in the PowerPoint presentation, videos were used as visual materials. As mentioned in the above section, videos were important resources for students to master pictographic characters' development. Lin et al. (2014) asserted that YouTube, as a 'free and user-friendly' video-sharing platform, also served as a visual stimulus (p. 108). Participants shared similar opinions during the interview:

Maria: Definitely, YouTube videos help to engage them with the learning. I think that reinforces what you've taught and presented in the PowerPoint. (First video interview, 24/06/2020)

Jean: Students enjoy watching videos. I found sometimes it really helps students understand because of visualising. By looking and by listening, they really engaged emotionally. It's a kind of interaction as well. Even though they just listen, it really helps them visualise. (First video interview, 14/07/2020)

Maria explained that as visual aids, YouTube is a more powerful tool than PowerPoint because it can further strengthen learning. Jean stated that because of visualising, YouTube can help to engage students by acting as a visual aid. According to the classroom teacher, shorter videos make impacts on children. However, they might get lost in long ones. Therefore, videos within 5 minutes were applied as essential visual materials when teaching pictographic characters to students.

4.5.3 Learning the pronunciation of the selected Hanzi

Another advantage of using YouTube videos was that it helped to teach students the pronunciation of Hanzi.

Interviewer: How did you teach the pronunciation when you teach them pictographic characters?

Jean: For Stage 1 students, the syllabus did ask students to know Pinyin. I would say, you get them to repeat from the video at first. Because listening to the video with animation is more attractive than you stand in front of them and tell them the pronunciation. (Fourth video interview, 12/08/2020)

Amy: Based on my past observation experience in Mandarin class, I think videos were effective for them to learn the pronunciation. I think that they definitely have been picking it up when they were following the video to repeat. They've picked it up from repeating it over and over and in different ways. (Fourth video interview, 21/07/2020)

The two participants pointed out that Pinyin could serve as a useful tool to help students become familiar with its pronunciation. Basically, students learned the pronunciation by imitating, practising and speaking aloud the targeted Hanzi after they heard the character through videos. All of the selected YouTube videos were produced by native speakers in China, which ensured that students would hear the correct pronunciation.

Notably, mastering pronunciation was not the main focus in this unit, since the link between pronunciation and the written form of Hanzi is not evident. The teacher-researcher intended to spend most of the time helping students master the written form so that the Chinese culture attached to Chinese characters would not be neglected. Therefore, time allocated to learning pronunciation emerged in the process of watching videos.

4.6 Practice Writing

Practice writing is another important code that appeared in the interview data. For example, Jean considered handwriting to be an important class activity in Mandarin lessons:

Interviewer: Will you ask students to practice writing in class?

Jean: Yes, we do. Practice handwriting is an essential step in learning language. Writing in my class with Stage 1 kids usually is a common class activity. (First video interview, 14/07/2020)

The fourth step in the lesson plan was practising writing the Chinese characters.

4.6.1 Modelling

To construct effective writing among Chinese beginning learners, modelling was considered to be a useful method by three participants:

Amy: I think the easy part of your lesson plan is practising repeatedly writing the word once you've shown them how to do it. I think that if it's been modelled to them, you show them how to do it. I think that will be easy for them. I think the main thing is if you model it first, then they try it. And then you reassure that they are doing in the right way. I think that will be good. (First video interview, 07/07/2020)

Jean: I looked at your worksheet. I like kids to have a handwriting. One of the activities in your lesson plan is to ask kids to copy. This is necessary because kids need to practice following the correct order. (First video interview, 14/07/2020)

Maria: It might be challenging for some students if you don't model it first. You need to really model what you're doing because they won't just be able to do it themselves. Maybe my class (Stage3) might be able to do it because they are older kids. Stage 1 students will need you to show, try what you're thinking and how you got to that point. (Third video interview, 07/07/2020)

Amy believed that teachers' modelling plays a significant role in the process of instructing writing. She indicated that some students need step-by-step instruction. Modelling could relieve the difficulty of writing complex Chinese characters. Jean also shared a similar opinion. Most students in her class were learning to write a completely new language, which would be difficult for them to do correctly without the teacher's modelling. However, by following the teacher's steps, young students can practise the strokes contained in Hanzi successively. Maria also contended that compared to older students, Stage 1 learners need more modelling to master the writing process. Therefore, the teacher-researcher planned to use modelling to instruct students to write Hanzi correctly.

4.6.2 Informal writing

Writing does not mean students simply use pencils to write Chinese characters on paper; rather, they can engage in writing with many creative tools. All participants expressed their positive attitudes towards writing in various ways:

Interviewer: What activities do you think are effective for students to remember a single word?

Maria: When you are trying to ensure students understand how to form it and say it, students will need a lot of repetition in different ways. For example, rather than writing the word they could make the character with playdough, paint it on a piece of paper, draw it with their finger in a sand tray or write it with chalk outside. (Third email

interview, 06/07/2020)

Jean: We cover the four skills: listening, speaking, reading and writing. And I always encourage my team, for each lesson you have to definitely cover four skills. For writing, it doesn't need to be using pencils, it can be different ways, it can be whiteboard, marker, it can be fingers, playdough, pasta, ice-cream sticks, it can be anything. (First video interview, 14/07/2020)

Amy: We also use playdough or hands-on materials to make letters and then have students trace the shape with their finger, they could do this with the pasta. (Fourth email interview, 06/07/2020)

Both Maria and Jean pointed out that teachers can guide students to write with various mediums. In Jean's lesson, she instructed students to master four skills: reading, listening, speaking and writing. As one of these skills, writing can be applied in many different and creative ways, such as playdough, pasta and even fingers. Amy also used hands-on materials to encourage students to learn writing. Hands-on can be regarded as practical work; generally, it means learning by experience (Holstermann et al., 2010). In this research, hands-on activities refer to using different tools for writing, such as pasta, fingers or string. It aimed to evoke students' interest and motivate them to write Chinese characters.

The interview data revealed the two main benefits of hands-on writing are 1) balancing repetition and variety, and 2) increasing students' engagement. Writing in creative ways manages to avoid boredom in repetition:

Jean: If you ask them to use a pencil every time, they will feel bored. You need to instruct them in different ways. They don't realise they are writing. It's a game we play, you know just playing something. (First video interview, 14/07/2020)

Maria: We always do some sort of fun activities that they almost don't know that it's to do with writing. They just think it's something fun and engaging. (Fourth interview, 29/07/2020)

Both Jean and Maria expressed a similar opinion that hands-on writing activities are fun and enjoyable for students. Students will probably practice writing the same word many times without knowing it. They do not realise they are learning because they consider the activity a game. Novice teachers are frequently told to employ multiple strategies to prevent students from being bored and disengaged (Badley, 2019). Meanwhile, applying different tools in writing can increase students' engagement behaviourally, emotionally and

cognitively:

Maria: Doing the same word in different activities help to engage students with deep cognitive understanding. (Third email interview, 05/07/2020)

Jean: Writing games will make the writing a bit more enjoyable. When they engage well emotionally, they won't have much behavioural problems. But if they feel bored, they will have more behavioural problems. (Third video interview, 22/07/2020)

Maria claimed that being immersed in the same content will improve students' cognitive engagement and deeper understanding. Jean believed that writing activities could increase students' emotional engagement because they enjoy the process. She also aligned emotional engagement with behavioural engagement, stating that the former will influence the latter. This means once students enjoy different writing activities, they will probably concentrate more on practising rather than being distracted by irrelevant items.

4.6.3 Comparison of formal writing and informal writing

Three participants also offered their opinions about the comparison of formal writing and hands-on writing:

Amy: I think they will need practice following the lines of the characters as well as making the character before they are confident to write the characters. Handwriting is our more structured lesson. We do have specific handwriting lessons to support the students with writing letters in the correct directions. (Third email interview, 21/07/2020)

Amy claimed that engaging in writing games builds a base level for students before they practice formally. She also indicated that students in this class are familiar with writing in different ways when they learn English:

Maria: I think these activities help students make connections and build a stronger foundation when it comes to writing with a pencil. The hands-on activity with the pasta is an easy way for all students to engage with recognising Chinese characters before and as well as formally writing them. We also do the other part of the lesson - formal writing. But the first part is building the foundation and the connections in their mind to remember the character. (Fourth email interview, 28/07/2020)

Interviewer: Do you think these activities will be as effective as formal writing?

Maria: I don't think it's one or the other. I think that they just go hand in hand. I guess these writing activities will be as effective as handwriting. I'm not saying that one is better than the other. I just think that they're both equally good. They just have different purposes. (Fourth video interview, 29/07/2020)

Like Amy, Maria also stated that hands-on activities could be used as a foundation before students write formally with a pencil. Further, she pointed out that hands-on activities and handwriting are equally important. For Stage 1 students, it is important to combine these two different techniques in their learning:

Interviewer: Do you mean writing with the pencil will be more effective than writing with pasta or string?

Jean: Definitely. From a teacher's perspective, it will also be more effective for us to understand if they can write each word correctly and beautifully. Writing games will make the writing a little bit enjoyable. (Third video interview, 22/07/2020)

Jean considered hands-on activities in writing further methods for making language learning more interesting and attractive to students. Unlike Maria, she believed that handwriting should be given more attention. She affirmed that practising handwriting with a pencil would be more effective than hands-on writing because it is also easier for teachers to understand whether students can write correctly and give them constructive feedback.

4.6.4 Considerations

A primary difference between Mandarin and English classes is that students have specific lessons for formal writing when learning English. However, the Mandarin teacher needs to squeeze reading, listening, speaking and writing into half an hour, which means it is hard to apply hands-on writing and formal writing together when students learn new Chinese characters. Interestingly, two participants thought more time should be given to formal writing:

Interviewer: Do you think I should spend equal time on both?

Maria: I would probably say like the hands-on would be slightly shorter and that you would still focus more time on the pencil. Not much different. Just a little bit shorter because that would be like your warm-up. (Fourth video interview, 29/07/2020)

Jean: Writing with a pencil/whiteboard marker is a formal way to practice writing, so this should be a focus and should be given more time. Using pasta or string is an

additional way to make the writing fun. (Third email interview, 20/07/2020)

Although Maria argued that hands-on writing and formal writing are equally important, it does not mean students need to spend the same time on each. Both Maria and Jean asserted that students should focus more on handwriting, which indicated that formal writing is the main way to consolidate students' learning. In addition, she suggested applying hands-on writing in warm-up activities.

As mentioned at the beginning of this section, each Mandarin lesson at RPS only lasts 30 minutes. Therefore, students will not engage in hands-on writing before formal writing. However, those writing activities can be applied in the revision part at the beginning of each lesson.

4.6.5 Whiteboard in formal writing

When talking about formal writing with interviewees, all interviewees highlighted the importance of whiteboards:

Amy: When practice writing, I might get them to do it on a whiteboard first so that it's not so tricky for them to practise using a pencil. Children often don't like to make mistakes. And if they do it into their books right away, then they go get rubbers because they're not happy with what they've created. But when they do it on a whiteboard, they can try different things, rub it off is really easy. And then when they're writing in their books, they can copy from what they've already done. So that's a strategy using the whiteboards in writing. (Third video interview, 15/07/2020)

Amy stressed the importance of using a whiteboard. She indicated that younger children are afraid of making mistakes. Writing on a whiteboard is less stressful for students because they can correct their work easily. Therefore, they might have more confidence to write on a worksheet with a pencil after practising writing on a whiteboard.

When asked how to deal with the problem that students sometimes disengaged in writing with a pencil, Maria pointed out that a whiteboard might help:

Interviewer: Based on my past teaching experience in your school, I found a problem that when I asked students to write the characters for several times on the paper, some students considered it was boring and they were not willing to do this. How do you deal with that?

Maria: I think if you just say to them, go and write it on your sheet. They're going to be scared to do it wrong. Or once it's on a worksheet, they think it's like final, like all they would just think like, 'Oh, I can't do it'. I think if you get them to do it on the whiteboard first, then you can walk around to monitor and correct them. Then get them to do the worksheet as the final thing. But don't get them to do it too much on the worksheet. Like it might only be one or two things on the worksheet. Get them to do it more on the whiteboard first, where it's freer, they will build their confidence there.

She believed that worksheets might be too formal for students to practise on. Both Maria and Amy stated that students could build confidence through writing on the whiteboard. They also claimed that students are afraid of making mistakes; Jean concurred:

Interviewer: Why do you think Stage 1 students prefer to practice on a whiteboard?

Jean: Maybe they just don't like make mistakes. Sometimes I will ask them to show me their writing on the whiteboard. But before I come close to them, they have already wiped it out because they didn't want me to see their mistakes. (Third video interview, 22/07/2020)

Jean also confirmed that students like to write on a whiteboard to avoid their mistakes being seen by others. This indicated that a whiteboard might help to create a more relaxing learning environment for students.

Considering all the three participants' responses and the time limitation in RPS's Mandarin class, it was decided that after students master the pronunciation, they would practise writing on a whiteboard. However, each lesson still addressed the importance of hands-on writing. Due to time limitations, hands-on activities were only adopted in revision sessions.

4.7 Exit Slip

An exit slip can be used as a tool for students to reflect on what they know or what they like. Leigh (2012) contended that exit slips help encourage reflective thinking in the classroom. Interviewees also mentioned the application of exit slips in their classes:

Jean: Exit slip is something that you can let students do in the end of the class. It could be used to understand their emotional engagement. If they feel happy, they can put their hands on the happy face. It is something like students need to do something before they leave. Because you focus on student engagement, I think you can use exit

slip to understand their emotional engagement or even cognitive engagement. (Second video interview, 17/07/2020)

Amy: They get an exit slip on Friday. They might have to correct the sentence and write it correctly. Or they might have to write their own sentences using whatever the topic was. And then we have a little post box in our classroom. It is actually at the front door. And they posted them into the box. (Second video interview, 07/07/2020)

The interview data showed that Jean and Amy applied the exit slips for different purposes. Jean used it to measure students’ emotional engagement, while Amy considered it a formative assessment tool to understand student learning results.

Student classroom engagement through student voices can reflect teaching practices to some degree. As mentioned in Section 3.5.4, the teacher-researcher planned to use post-it note questions to collect student feedback. Considering students in this class were used to engaging with exit slips, the post-it note questions were transferred into exit slip activities. At the end of the third and fourth Mandarin lessons, students were told to write down their answers on post-it notes (see Table 4.7).

Table 4.7 Questions in exit slip

Lesson	Question
The third lesson	What I learnt.
	What I want to know.
The fourth lesson	What I liked.
	What I didn’t like.
The fifth lesson	What the easy parts were.
	What the tricky parts were.

4.8 Storytelling

Storytelling was another significant code that appeared in the data from teachers’ interviews. As Jean and Amy suggested, storytelling might be a useful method to improve students’ memory:

Jean: Perhaps you can tell a story to help students learn the particular Chinese characters. I attended a workshop this morning, the professor emphasised that story can help kids to memorise the vocabulary. It is really sparkling to me as well. If I am going to teach them some key words, I will put these words on the board. I will use

these words to tell a story, instead of showing the flash card and let them copy it. This might make them forget the vocabulary easily. Given a story according to those words, I think kids will remember them. (Second video interview, 17/07/2020)

Interviewer: For Stage 1 students, what do you think of the effect of stories in language teaching? Maybe I can tell a story about the mountains, the sun, the moon?

Amy: Yeah, I think that's great to use them. You have to do it in their language, otherwise they won't understand. It's important for their understanding to speak in their first language first.

Interviewer: Yeah. So maybe when I tell the story in English, when it comes to the word of the mountain, I can say it in Mandarin to reinforce?

Amy: Yeah, maybe you say the words in English and then you say it in Mandarin as well so that they get both models. (Fourth video interview, 21/07/2020)

As the interview data illustrated, Jean was inspired by a workshop she attended that stories can benefit students' acquisition of second language learning. From her perspective, compared to traditional methods, stories enabled students to engage cognitively, so they would have stronger memories of the content they have learned. Therefore, the teacher-researcher considered designing stories that link to the characters the students are required to learn. When talking about this idea with Amy, she suggested that telling the story in Chinese would not be ideal for beginning learners due to their limited Chinese acquisition. Therefore, the teacher-researcher applied this idea in the final four lessons of the unit, speaking the story in English and strengthening the targeted characters in Chinese.

4.9 Conclusion

As can be seen in this chapter, eight codes emerged from teachers' interview data. In the case of the unit of work, the data illustrates several important factors that might help improve engagement in a Stage 1 Mandarin class. These include choosing appropriate teaching content according to students' age; using consistent lesson structures to ensure students are confident; creating game-based learning context; drawing and using pictures as visual materials; adopting YouTube videos as digital aids and visual materials; combining hands-on activities and whiteboard in writing; and applying storytelling. These codes provided the novice teacher-researcher with a suite of strategies for engaging students in their learning of Hanzi. The following chapters discuss the seven codes applied to the lessons of the unit of work and the students' learning.

Chapter 5: Findings from Teaching at RPS

5.0 Introduction

This chapter mainly draws on students' data and teacher-researcher journals. The section on the effects of game-based learning, practice writing and formative assessments also draws on teacher interviews. First, the chapter discusses evidence of learning from multiple aspects and student feedback from exit slips. Then it presents the results of formative assessments. In the end, it also discusses the interaction of all the teaching strategies.

5.1 Evidence of Learning

As stated in Chapter 4, the teacher-researcher listed several codes conducive to student engagement from the teachers' interviews. This section mostly considers the codes or strategies the teacher-researcher applied in the former six lessons and how they impacted student engagement. This helps to answer the second contributory research question.

5.1.1 Effects of game-based learning

As mentioned in Section 4.3, when asked how to engage Stage 1 students in Mandarin class, all teachers repeatedly mentioned games. In real teaching, game-based learning played an important role in increasing student engagement and also as evidence of student learning.

First, the games managed to entertain students, and the enhanced emotional engagement stimulated their behavioural engagement. The following is an example of how games influenced students' interest and behavioural engagement:

At the beginning of this lesson, students participated in a game called 'Can you read my mind'. I asked them to write one Chinese character from 山(mountain)、云(cloud)、水(water)、雨(rain). After I tell them the rule, they became excited and said, 'This means we need to read your mind!' Because of the time limit, we only played five rounds. But each time students screamed when they wrote the same Chinese character as the teacher. Other students who did not write the same character with me were eager to play the next round. (Reflective journal, 09/09/2020)

Interviewer: My next question to all of you is what is your favourite game? Remember we played a lot of games? Let's review them together. The first one we played was that I gave you one minute, and you need to write as much as possible.

Students: Oh yes, the timer!

Tank: The second game is passing the ball.

Monica: I don't know if this is the third one, but I love the one when we read your mind.

Duke: When we play that game, I look at your hands and think of what this looks like. It's fun.

Tank: My favourite game is reading your mind. Because I like to see if I can get the right character that you had. My favourite one is moon which we learned last lesson.

Interviewer: When you wrote the same character as me, how did you feel?

Tank & Duke: Excited! Happy!

Interviewer: Did you all feel like that?

Lana & Monica: Yes, sometimes when we get the same answer with you hahaha.
(Focus group, 23/09/2020)

Clear confirmation of students' emotional and behavioural engagement could be identified from the above data. In the focus group, several students were eager to express how much they loved this game, and it was noted that it brought positive emotion to students and boosted their enthusiasm. In addition, their scream could be identified as a sign of excitement. Moreover, according to the teacher-researcher's observations, almost every student was involved in this game. They demonstrated an impressive performance with high behavioural engagement. It could be suspected that when students began to engage emotionally, their behavioural engagement would be enhanced subsequently.

Second, as evidence of student learning, games witnessed student achievements and progress. Students' performance in some games could be regarded as evidence of their cognitive engagement. For example, students played a game of 'swatting a fly' (see Table 4.4).

We played the game of swatting a fly. After we reviewed all the characters, I wrote six Hanzi on the whiteboard. When I introduced the rules of this game, I told them I will say one of these characters in Chinese and one student need to use a badminton racquet to swat it. Almost 80% of the students looked like very happy and confident.
(Reflective journal, 16/09/2021)

Interviewer: John, what is your favourite game?

John: When we need to get a bat to swat. There is no particular reason I just like it so much.

Monica: I like swatting a fly.

Interviewer: Why do you like that?

Monica: Because every time you can kind of remember what character it is. It's fun because people can actually remember the words through pictures. (Focus group, 23/09/2020)

Interviewer: What do you think of the game of 'swatting a fly' in the sixth lesson?

Amy: I remember they're having a lot of fun with that. So that was a good environment for them and a fun way to learn. (Fifth video interview, 24/09/2020)

In this game, the teacher-researcher presented all the Chinese characters the students had learned on the teacher's whiteboard (see Figure 5.1). Student participation in this game allowed the teacher-researcher to know whether they could identify the pronunciation and meaning of each character. If they were able to swat the correct Hanzi, then it could be speculated that they had engaged cognitively when they were learning pictographic characters. In reality, when the teacher-researcher spoke in English, students found it was easy because nearly 70% of the students could do it successfully. This might be a confirmation of their high cognitive thinking. However, when the teacher-researcher spoke the Chinese pronunciation, students needed more time to think. This might be because there had been less emphasis on pronunciation. Then again, being involved in this game was a process of using cognitive thinking. Like student Monica mentioned in the focus group, this game helped them engage cognitively by thinking and remembering which character they should swat.

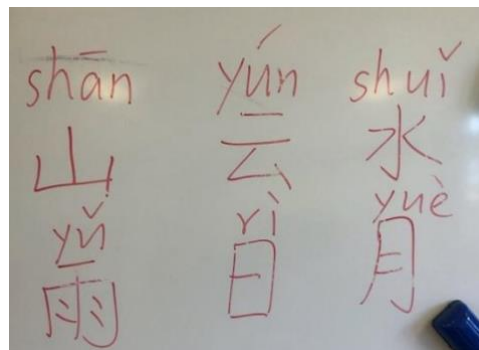


Figure 5.1 Teacher's whiteboard during 'swat the fly'

Unlike the ‘swatting’ game, ‘Can you read my mind’ requires students to participate with their clear comprehension and deep understanding of all the Hanzi they learned. Therefore, not all students wanted to have a try. Four students in this class refused to play this game. Similarly, Jean also stated that in her class, although most of the students were willing to participate in this game and performed well, several students refused to have a try. According to Jean, this might be because they were afraid of making mistakes and being seen publicly.

Jean: For most kids, they are fine. They get excited to learn a language through games. But you will find some kids feel scared. They don’t want to do it because they don’t want to get embarrassed. But I would say to them in whisper, ‘No worries. I will help you’. Then they feel safer and are willing to try. Because I don’t want to leave them such an impression: Mandarin lesson is something will let me feel stressed and embarrassed. (Second video interview, 17/07/2020)

As the excerpt indicated, Jean did not give up on those ‘shy’ students. Rather, she used her strategy to improve their engagement by encouraging them. She also mentioned that this method would decrease the students’ anxiety, which might indirectly help arouse their emotional engagement. Based on the teacher-researcher’s past teaching experience at RPS, students who were not willing to try might be because they did not have enough confidence. They were afraid of making mistakes and their classmates laughing at them. But with the classroom teacher kindly encouraging them, they would become more confident and willing to engage, at least behaviourally. For those students who were not willing to participate at first, the teacher-researcher also tried to encourage them. In reality, two of them were motivated by the encouragement—they could swat the Hanzi on the whiteboard, although they took more time to think or were reminded by the teacher-researcher. However, another two students were not easily persuaded by encouragement. This might be due to their particular personalities. At last, the teacher-researcher invited them to pronounce the Hanzi from their seats.

5.1.2 Effects of drawing pictures

In this unit of work, drawing pictures was the second step in each lesson, which required students to draw a picture on their whiteboards before they saw the exact Hanzi. During interviews with three teachers, they stated that drawing could increase emotional engagement and cognitive engagement among Stage 1 students. In the real teaching, this

activity improved student engagement in the following ways.

First, drawing increased students' behavioural engagement. Although three teachers did not mention this in the interviews, according to the teacher-researcher's observation in the former six lessons, drawing pictures was a successful stimulus for students to be engaged in their learning. It might be because drawing was an easy step for them, and it did not last long. Almost no one ever disengaged from their drawing. When students finished, they tended to ask the teacher-researcher to see their work and were eager to show their drawings in class (see Figure 5.2).

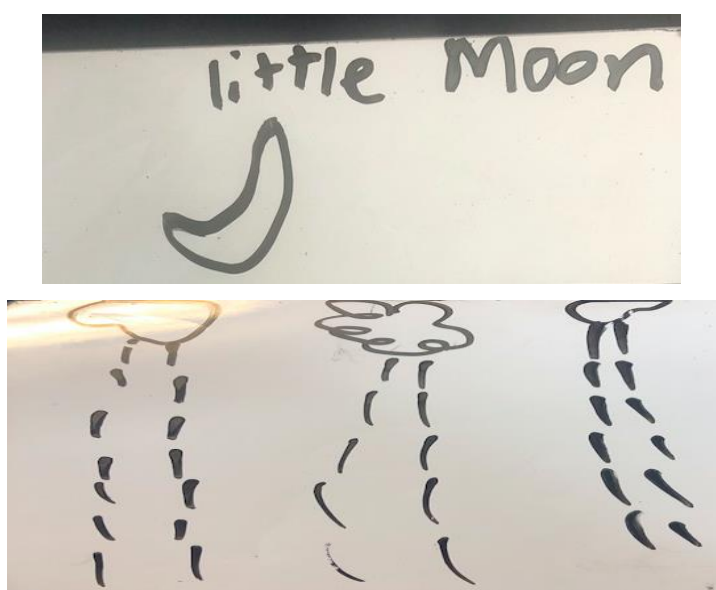


Figure 5.2 Two examples of students' drawings

Second, drawing triggered the students' interest. Based on highly emotional engagement, the students' attention was drawn to the Mandarin class immediately. With high concentration and enjoyment, the students were able to absorb the language heard cognitively:

Almost every student enjoyed drawing. Every time I told them that we need to draw something first, they stood up immediately to take their whiteboards and asked, 'Miss I am ready, what should we draw today?' or 'Can we draw person/eye/flower/tree today?' In addition, the classroom teacher Amy also expressed that 'I can see students love drawing' after class. (Reflective journal, 09/09/2020)

Third, drawing enhanced students' cognitive engagement because pictures help them understand the meaning of the Chinese characters. Following is an example of how students remember Hanzi with the aid of its image:

Interviewer: Can you tell me one by one what is your favourite character?

Mike: Rain.

Interviewer: Why do you like rain? I think it is the most difficult one.

Students: No, it is easy. It's super easy.

Monica: Because you remember it easily. Because it's like looking from a window and see all this rain. It looks like a window with that line across little drops of rain.

Mike: I like rain because it's more difficult. And I like to challenge myself.

John: I think as like the line going through is lightning. And the little lines going...

Interviewer: Little lines? Do you mean these four drops?

John: Yes. It looks like the rain coming down and the two lines going up is trees. And the line going there is cloud.

Interviewer: So this is the cloud, the sky, and the trees. And in the middle, is it lightning? (The idea came from the student John and the teacher-researcher put his idea on the paper, see Figure 5.3)

John: Yes. (Focus group, 23/09/2020)

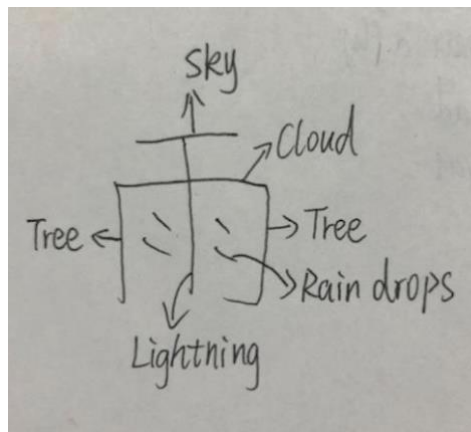


Figure 5.3 How John thinks of 雨(rain)

The above data indicate that pictures relieved the difficulty for students to recall the meaning of pictographic characters. The teacher-researcher considered the Hanzi 雨(rain) difficult due to its complex strokes. However, all students thought it was easy because of the impressive shape of rain. Monica and John shared their similar but different methods of how they build connections between the character and its meaning, which suggested their high cognitive engagement.

In conclusion, drawing had a positive influence on student engagement. This step offered students an opportunity to learn a language with a simple beginning based on Stage 1 level, especially for the non-Chinese background children, as they could pick up the knowledge and refresh their memory by linking it to their drawing. Such a practice provided students with more confidence to improve their individual learning.

5.1.3 Effects of watching YouTube videos

This section describes how YouTube videos used as visual aids effectively improved student engagement in the Stage 1 class. It then discusses the effects of learning pronunciation through videos.

First, as indicated in the unit of work, the teacher-researcher prepared one or two YouTube videos for each lesson. For example, the first video presented was an introduction to Chinese pictographic characters. In this video, the TED (Technology, Education, Design, <https://www.ted.com/>) speaker introduced eight Hanzi to show the audience how many pictures related to Chinese characters:

When I introduced what is Chinese pictographic character to students, students were still noisy and had not been settled down. However, when I played the animation of pictographic characters to the students, they became very focused and calmed down immediately. Most of the students followed the video to use their use body to present the Chinese characters such as 口(mouth) and 人(person). When we finished watching the YouTube video, a year one boy asked me, ‘Miss, are we going to learn person today?’ Another girl asked me, ‘Miss, can we start right now?’ (Reflective journal, 12/08/2020)

As the excerpt shows, the teacher-researcher failed to engage students at first. This might be because it is hard for Stage 1 students to understand and concentrate without any particular scaffolding strategies. This addressed what Amy mentioned in the interview, ‘[If] you just standing in front of them and talking. They’re not going to be interested’ (Second video interview, 07/07/2020). In fact, the teacher-researcher noticed that students were not attracted at the very beginning of the video. Since it was a TED talk, the first minute of the video was only the presenter speaking. However, students began to demonstrate some behavioural engagement when the speaker showed how this ‘drawing’ method work. First, they stopped to chat with each other and kept their eyes on the screen. Second, they imitated

the speaker to make Hanzi, such as opening their mouth until it was square. Several students were also eager to learn some new characters after watching this video. This might indicate that at least part of the class engaged emotionally.

During the focus group interview, students also demonstrated their learning outcomes through watching videos. The students provided feedback on the use of video:

Interviewer: We concluded just now that we have learned six Chinese characters in total. Do you remember that these characters are developed from pictures?

Students: Yes!

Mike: You showed us a video before. I know how to write person, and it is just like this. [He used a pencil to write 人(person) on the paper.]

Monica: In that video, the mountain is a big mountain in two small mountains.

Mike: And the sun is like a window...

Lana: A person looking out to the sun! (Focus group, 23/09/2020)

It was the first time that students had seen Chinese characters in that TED talk. Moreover, the Hanzi 人(person) had not been taught in the former six lessons, but one boy demonstrated his memory capacity and cognitive engagement. He only saw this character one time in that video, but he could still remember it after six weeks:

Interviewer: I remember you said you want to learn person in the first lesson, why?

Mike: Because I know how to write person.

Interviewer: How do you remember that?

Mike: I don't know. I just learned it from the video, and I remember that. It's not difficult. (Focus group, 23/09/2020)

Thus, the teacher-researcher concluded that YouTube videos with vivid pictures were strong visual aids to improve student engagement in Mandarin lessons.

Second, as mentioned in Section 4.5.3, YouTube videos were the main media for students to master the pronunciation of Chinese characters. In the class, most of the students imitated and spoke them out when they heard the pronunciation from the videos. This helped familiarise them with the sound that describes the characters. The teacher-researcher also wrote Pinyin on the whiteboard and stressed the tones in each character. However, the

learning effects were as expected:

When we played the game of ‘swatting a fly’, students were more confident when I said the character in English. When I spoke them in Chinese, most of them need to look at the Pinyin on the whiteboard. If I remove Pinyin to increase the difficulty, students obviously felt it more challenging. This might indicate that they had poor memories of the pronunciation. (Reflective journal, 16/09/2020)

Data above indicated that students had poor memories of the pronunciation. When the teacher-researcher removed Pinyin from the whiteboard, less than 20% of the students could remember the pronunciation. Thus, learning pronunciation through videos with repetitive imitation might only affect their short-term memory rather than long-term.

5.1.4 Findings of practice writing

As mentioned in Section 4.6, practice writing Hanzi was the last teaching step in each Mandarin lesson. This section discusses the findings of the stroke order in writing.

Following the correct order when writing Hanzi helps students understand the way the character is built. It also helps to save time, avoid mistakes and enhance the beauty of writing. If students fail to follow the correct order at first, this can influence the speed of writing characters later when writing Hanzi becomes more complex. Wu and Chen (2020) claimed that only those students who master the stroke rules of Chinese characters could easily remember them and improve the writing speed of Chinese characters to a certain extent. Among teacher interviews, the stroke order of Hanzi was considered a main difficulty for Stage 1 students to learn Mandarin:

Interviewer: Based on your former observing experience, what difficulties do you think that children would face with learning Hanzi?

Maria: It’s good when you have the tracing sheet for them to practice before they do it themselves. So not just copy from the board. They need it in front of them to trace over the top. I think when you have that tracing sheet, it helps them because I find students sometimes get it wrong when they’re just looking at the board.

Interviewer: Do you mean the stroke order?

Maria: Yes. Because otherwise it’s just random to them. Even us when we teach handwriting, we have to tell them start the top, go around, up and down. You know for letter ‘A’, we tell them start at the middle, go around. Otherwise they will start at

the bottom or they'll just stop wherever they think it works. So as long as you make sure that you tell them where to start—the order, it would be fine. (First video interview, 24/06/2020)

This excerpt shows that Maria expressed the difficulty in writing Hanzi in the correct order. In another interview, she also pointed out the different writing order between English letters and Hanzi:

Maria: Compare to English letters, there were lots of steps contained in Hanzi. Whereas I guess when we're teaching how to write the letters in English, it's more of one motion. For example, 'o' and 'a' is around. It is up and down. And then the 'd' is similar. It goes around, up, and then down. Whereas I find with the Chinese characters, they're more of multiple strokes. And I guess that's the difference in how we teach the writing order. Students might not be used to because they're taught not to take their pen off the page. (Fifth video interview, 02/10/2020)

Maria explained that the formation of Hanzi is so detailed that students might need time to become accustomed to doing it.

In the real teaching context, the teacher-researcher also found a problem related to the stroke order when teaching handwriting about Hanzi:

This was the first Mandarin lesson. Students started to learn 山 (mountain) and 云 (cloud). The biggest problem in writing Hanzi was that students did not follow the correct writing order. Even though I strengthened several times, students still preferred to use their own 'method'. This is similar to what Maria said in the first video interview. (Reflective journal, 19/08/2020)

After the teacher-researcher revealed the relationship between the picture and the Chinese character, she modelled it on the whiteboard twice. However, the results were not as expected. Some students strictly followed the correct order. For example, when the teacher-researcher presented the stroke order of 云 (cloud) on the PowerPoint (see Figure 5.4), some students immediately copied these steps onto their whiteboards (see Figure 5.5). After that, they practised this particular character very hard. However, some students tended to ignore the correct stroke order. According to the teacher-researcher's observation, half of them still used their own 'creative' methods.

Cloud

Yún

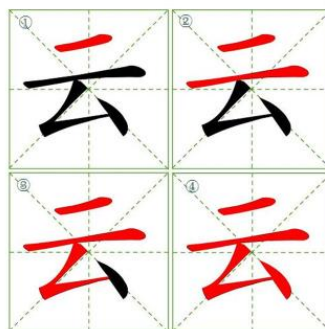


Figure 5.4 Stroke order of 云 (cloud)

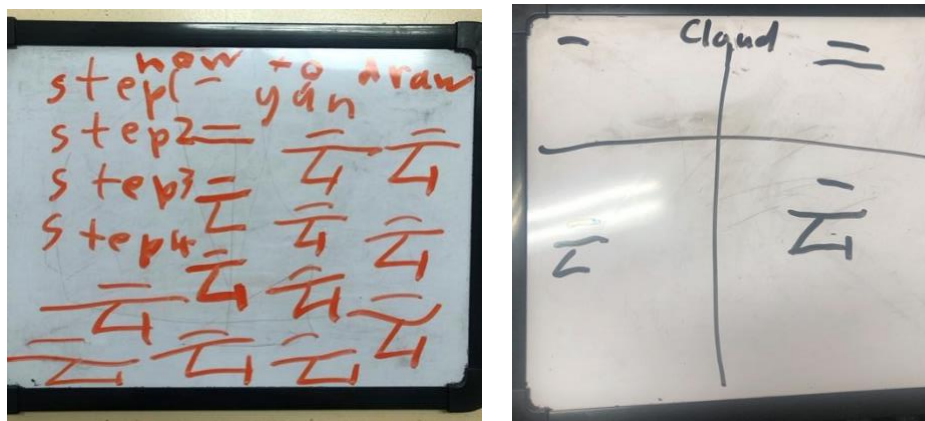


Figure 5.5 Works of students

Thus, it was found that effective strategies are necessary. In the former teacher's interview, one participant shared her suggestion on how to teach students the correct stroke order:

Maria: It's good when you have the tracing sheet for them to practice before they do it themselves. So not just copy from the board. They need it in front of them to trace over the top. I think when you have that tracing sheet, it helps them because I find students sometimes get it wrong when they're just looking at the board. (First video interview, 24/06/2020)

Maria believed that the tracing sheet might be a useful tool. However, because of the time limitation, students in this class only practised writing on their whiteboards. When the teacher-researcher proposed this problem during the workshop, she received a suggestion:

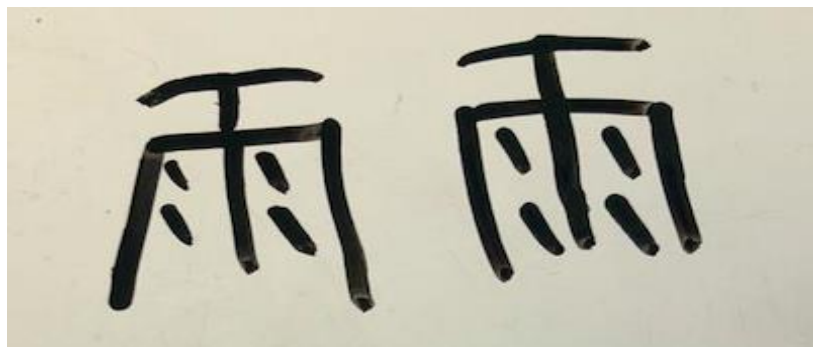
In our recurring workshop I put forward the question about students do not follow the correct order when they write Hanzi. The manager in ROSETE program suggested

that the teacher can model it on the big whiteboard step by step without showing them the integrated character at the same time. In this case, students have to follow the teacher's instruction to write the character rather than copy from the PowerPoint in their own ways. (Reflective journal, 21/08/2020)

Due to this feedback, the teacher-researcher changed the teaching steps slightly. Rather than firstly showing the links between the Chinese character and its image, the teacher-researcher taught students how to write the Hanzi after they drew the picture. Without having the exact Hanzi on the PowerPoint or the video, students had to follow the teacher-researcher's steps to write the targeted Hanzi. She used this method from the third lesson onwards, and it was effective among students:

When I taught them how to write the Chinese character of rain, I did not show it on the PPT [PowerPoint] before I modelled it on the whiteboard. Therefore, students had to follow me step by step. After I modelled this character two times on the whiteboard, I presented the word on the PPT and showed them the video. Then students began to practise writing with their marker on their whiteboard. Students can write with the correct writing order this time. However, after they saw the completed Hanzi on their whiteboards, they would still use their own ways to write it. (Reflective journal, 26/08/2020)

The above data shows that this method only worked effectively when the students wrote it the first time. For some students, they had no problems to remember the correct order and they could do well in writing Hanzi. However, for other students, they tended to use personal habits to write it after they knew the whole character. For example, some students wrote all the horizontal line first and then all the vertical lines. This caused problems in



writing, such as one student forgetting the last little hook in the rain (雨) (see Figure 5.6).

Figure 5.6 A student's mistakes writing rain (雨)

Another strategy the teacher-researcher used was inviting students to come to the front and show how they wrote the targeted character. Other students needed to check if this student could write it correctly. This way, students could identify their own mistakes with their classmates' help. They also developed a stronger memory of the stroke order of each character.

Interestingly, students in the focus group did not consider following the correct order difficult:

Interviewer: What other parts do you think is difficult? Do you think following the correct order is difficult? For example, the Chinese character of mountain, you should write like this, right? You can't write like this. You must start from here and then here (The interviewer wrote 山 on the paper).

Monica: Yeah. You can't just stop from the little one and go that low stick that goes down and then like that and go like that things (he wrote something on the paper).

Interviewer: Yes.

John: You can't do like this (he wrote something on the paper), that's not the correct order. You're supposed to go up, down.

Interviewer: Very good. Do you think remembering the correct order is difficult?

Students: Not really. No.

Monica: I know all you think of it is like most of the English letter start from the top except for some letters like 'd' start the middle. But most of them start from the top and the same in Chinese writing. (Focus group, 23/09/2020)

This excerpt suggests the stroke order contained in Hanzi did not bother the students too much. Monica even concluded the similarity between English letters and Chinese characters. From her perspective, the main writing order of Hanzi is starting from the top to the bottom. This might be because they had only learned six Chinese characters so far, in which the basic structure is top to the bottom. At the same time, it could be that Monica used her cognitive thinking to help remember the writing order.

5.2 Feedback from Exit Slip

The exit slip was also important evidence of learning (see Section 4.7) that appeared in the

interview data from three teachers. Exit slips were used in this case study to ask students to reflect on their learning experience. The teacher-researcher passed exit slips out in the last few minutes of class, and students turned them in before leaving class.

Encouraging Stage 1 students to reflect on their learning process at such an early age is not easy. Although the teacher-researcher designed probe questions according to their level of understanding, not all students offered valid feedback to every question.

At the end of the third lesson, students were required to reflect on two questions: ‘what I learnt’ and ‘what I want to know’. For the first question, most of the students listed the Chinese characters they had learned in the former three lessons. Half of them were able to write them in Chinese, while other students wrote them in English, such as ‘I learnt how to write fractions [characters] like mountain, cloud, water and rain’. For the second question, students had different answers (see Table 5.1). The results show that eight students stated they want to know all Chinese characters. I noticed most of them were always passionate about learning Chinese, except for one boy who conveyed to me that learning Chinese was a waste of time:

I saw Martin wrote, ‘I want to know all the Chinese characters’ under the question of ‘What I want to learn’, which surprised me a lot. In the past, he always asked me ‘Why we need to learn Chinese? I really don’t know the what is the sense.’ Then I asked him why he changed his mind. He answered, ‘Because if you want to go to China, you have to learn how to say Chinese and read the menu in the restaurants’. I kept asking him why he wanted to go to China. He said, ‘because I think Chinese people are smart.’
(Reflective journal, 02/09/2020)

This excerpt indicated some shifts in Martin’s attitude towards Chinese. He did not think Chinese was worth learning before. However, learning that ancient Chinese created some Hanzi according to the image made him develop a stronger interest in this language. This might also be a sign of increased emotional engagement. This transformation in attitude to Chinese learning aligned with evidence collected through worksheet practice, in which Martin achieved an accuracy rate of over 85%.

Second, a student, Duke, particularly wanted to learn 200 Chinese characters. I asked him why he wanted to learn 200 Hanzi. He told me it was because he learned from the video in the first Mandarin class that understanding 200 Chinese characters would allow learners to

read a lot. The video suggests that comprehending 200 Chinese characters is enough to read road signs, restaurant menus and understand the basic idea of web pages or newspapers (https://www.ted.com/talks/shaolan_learn_to_read_chinese_with_ease). This showed that he really paid attention to the video, and he engaged behaviourally and cognitively. Notably, according to this unit of work, students would only learn 10 Hanzi in the whole term. Learning 200 Hanzi might take the rest of his primary school education.

Third, other students wanted to know one particular Hanzi like tree, class and Earth. When the teacher-researcher asked Hannah why she was interested in the Hanzi soil, she said because Duke knows how to write this. This might indicate that peer feedback would influence student cognitive engagement.

Lastly, it should be noted that most of the students focused on how to write Hanzi, while only one student, John, wanted to learn the speaking part of Chinese.

Table 5.1 Answers to ‘What I want to know’

What I want to know	
8 students	All Chinese characters
Duke	200 Chinese characters
Kate	fire crackter [character]
Monica	I want to know how to write class.
Hannah	I want to know the soil in Chinese.
Lana	If there is a character of Earth. (She also drew a picture of Earth near it)
Nicole	If there is a character of tree.
Eaton	My name character.
John	How to say OK in Chinese.

At the end of fourth lesson, students wrote answers about ‘what I liked’ and ‘what I did not like’. There were 18 students who gave reflections on the first question. Five of them simply wrote ‘everything’ on the post-it notes, while the rest offered more detailed information (see Table 5.2). Among the six students who liked games, four of them wrote ‘the game when we had 1 minute to write as many times as we can’. The other two students drew a picture of several people sitting in a circle, which indicated the game ‘passing the ball’ (see Table 4.4). This data suggests that short, simple competitions more easily aroused students’ emotional engagement.

Table 5.2 Answers to ‘What I like’

What I liked	
6 students	Games, such as ‘the game when we had 1 minute to write as many times as we can’.
5 students	Each of them wrote their favourite Chinese characters.
2 students	I like learning about the Chinese characters.

Compared to the former question, the second one was harder for students to answer. Seven students wrote ‘nothing’ under the question of ‘what I did not like’. Two students said they did not like the character of water (水):

After class, I asked Hannah and Edwin about why they did not like it. Both of them told me that because this character was hard for them to remember. This means they had difficulties in building connections between this particular Hanzi and its image. (Reflective journal, 09/09/2020)

It could be deduced that when some students found something challenging or difficult, they have less interest in it. In addition, a student, John, wrote ‘I don’t like when we play the game’:

When I asked the class to write ‘what I didn’t like’, most of them wrote ‘nothing’. However, one boy wrote ‘I don’t like when we play the game’. This was a surprise because this boy always did excellent jobs in Mandarin lessons. He indicated that he did not like the game ‘passing the ball’. However, according to my observation, he participated in this game actively. I asked him why he did not like this game. He explained that because it was too fast. I asked him again why you don’t like fast games, he said because it would waste energy. (Reflective journal, 09/09/2020)

The contrast between what John did in the class and what he reflected in the exit slip could be a strong signal for the teacher-researcher that sometimes, high behavioural engagement does not mean high emotional engagement. Also, the reason John did not want to use up energy might be because the students have recess after Mandarin class, which is the time they eat some food and play outside.

At the end of the fifth lesson, students gave feedback on what they thought were the easy and difficult parts. Seven students wrote ‘nothing’ under the second question. These might be the most difficult two questions to reflect on because a few students left their notes blank.

Feedback from the others is summarised in Table 5.3.

Table 5.3 Answers to ‘What the easy parts were’ and ‘What the difficult parts were’

	The easy parts	The tricky parts
Paul & Aliya	When we drew the symbols	When we wrote the symbols.
Louis	Drawing	Guessing
Sophie	Learning easy characters	Learning hard characters
Tank	No easy parts	Learning Chinese characters
Celine	No easy parts	Writing orders
John	日(sun)	Play the game
Marshall	水(water)、日(sun)、山(mountain)	云(cloud)、雨(rain)
Hannah	云(cloud)、日(sun)、山(mountain)	水(water)、雨(rain)
Nick	日(sun)	云(cloud)
Alex	山(mountain)	月(moon)
Monica	山(mountain)	云(cloud)
Sarah	山(mountain)	New things
Lana	Writing characters	Nothing
Emma	All of them	Nothing

Findings from the data above contained three parts. First, three students regarded drawing as an easy part, and two thought writing was the tricky part. Second, two students in particular did not recognise any easy parts in their learning. Specifically, Tank thought learning Chinese characters was a purely difficult task, and Celine regarded the writing order as difficult. Third, although there was a variance in what they thought was easy or difficult, it could be concluded that among all the Chinese characters they learned in the former five lessons, 日(sun) and 山(mountain) were considered the two easiest Hanzi, while 云(cloud) and 雨(rain) were identified as the two most difficult ones.

5.3 Formative Assessment

In the previous six lessons, the teacher-researcher applied three formative assessments. First, two worksheet practices helped to understand whether students were able to identify and write the Chinese pictographic characters. Second, students created their own pictographic characters about a star to demonstrate their cognitive engagement. All these assessments were used to answer the second contributory research question.

5.3.1 Worksheet practice

Students did worksheet practice in the third lesson and the sixth lesson. In the third lesson, students were asked to complete a small talk related to the character of 水(water). In the sixth lesson, the teacher-researcher asked students to finish two more complex exercises to understand their achievements (see Appendices E and F). These two worksheet practices assisted in answering the main research question: *How may pictographic characters potentially improve learning in Western Sydney Mandarin classes following the delivery of a unit of work?*

Word circling

Students learned the Chinese character of water (水) in the second lesson. At the beginning of the third lesson, they were asked to do an exercise (see Appendix E) as a review activity. This worksheet was aimed at determining whether students could recognise the character of 水 (water) among other Hanzi, including 山 (mountain) and 云 (cloud), which they learned in the first lesson. The result of this worksheet (see Figure 5.7 as one example) and data from the teacher-researcher's journal indicated that most of the students could identify this particular character.

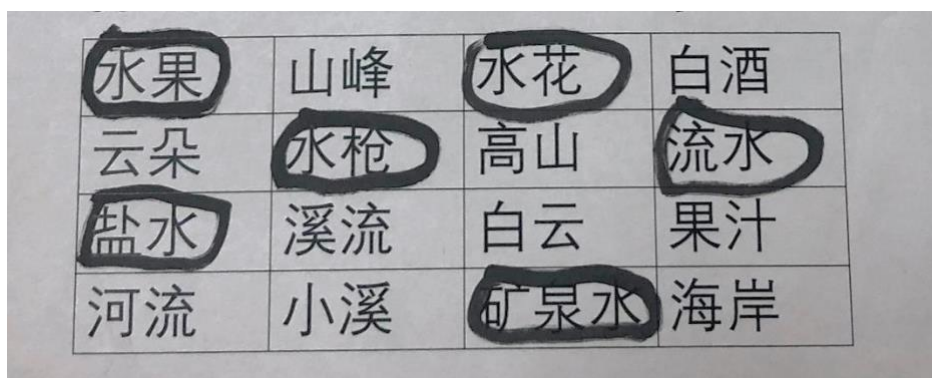


Figure 5.7 One example of students' work

This lesson started by giving students worksheets. I asked them to circle Chinese words which contained the character of water. When they were doing that practice, some students said, 'Miss, I know which one is water. It is easy.' Students did a very good job because almost 90% of them finished it very quickly without any mistakes. (Reflective journal, 26/08/2020)

This reflective journal excerpt suggested that most of the students engaged cognitively when they were learning 水(water) because they were able to identify this character on the

worksheet. However, there were six words that contained 水(water) in total, and the data showed that two students only circled half of them. The classroom teacher indicated that these two students had some behavioural engagement problems. According to the teacher-researcher's observation, they also had difficulty focusing on tasks in other classes.

Matching and Hanzi writing

The second worksheet contained two activities. The teacher-researcher gave students 10 minutes in total to finish the two tasks, which they were asked to do individually. The first one was a matching game. Students needed to match the picture, the English word and the Chinese character (see Appendix E). This activity helped to understand whether students could identify the Chinese character with the aid of the picture. In teacher interviews, Amy indicated that the matching activity would be familiar to students as they were used to playing matching games:

Interviewer: Do students always do matching games in other subjects?

Amy: Yes. They might play a matching game in which they need to match the correct one.

Interviewer: I used two formative assessment strategies in the 6th lesson. The first one is a matching game. The second one is that they write Chinese character of each picture. What do you think of them?

Amy: I saw this worksheet in your email, and I think that's great. This is absolutely on Stage 1 level and I think that's perfect. (Third video interview, 15/07/2020)

Notably, matching the picture and English word was not difficult for students because this knowledge was gained from their past learning. Jean concurred with this point:

Interviewer: What do you think of the matching game as formative assessment activity?

Jean: For the matching part, I think it is much easier. It shouldn't be too hard for them. Definitely, they can understand the English and the picture. I guess it won't be hard for them to match the English word and the Chinese character. (Third video interview, 22/07/2020)

Jean confirmed that matching the English word and its image is something familiar for students. Therefore, if students could successfully match the English word and the

pictographic character, it could be speculated that they had built some new knowledge about Chinese pictographic characters. This also addressed the schema theory (see Section 2.1). The results showed that except for one special needs child, 19 students completed the first task. Two other students failed to pay attention to the worksheet because they kept talking with each other. Among the 19 students who finished the first activity, no one made mistakes matching the picture and the English word. This information reconfirmed that knowing the English word for each picture was their prior knowledge. However, the results also showed that only 13 students successfully matched the Chinese character and the picture correctly. Seven of them were Year 2 students, and six of them were Year 1 students. There was almost no difference between Year 1 and Year 2. The mistakes of the six other students are summarised in Table 5.4. It is clear that 云(cloud) and 水(water) were the most difficult characters for the students. Notably, students also confirmed that it was hard to make connections between the Chinese character of water and its image.

Monica: Pictures are not always easy with it. Like this one (she pointed to the Chinese character of water), we can't really think of water when we see the picture.

John: Because when you think of the (Chinese character of) water, you can't really picture it in your mind because water is just like a little droplet. And then when you look at that (the Chinese character of water), it doesn't really look like water drop.

Lana: But I think if you don't think of water as like a water drop, it's kind of looks like fluid water in a river or waterfall. with the street point of it's a lens sticking out. And that those lines I like water like those lines. Cause you don't always have to think of like a little drop of water. You can also think of it like a different way, like a river.

Duke: But that does not really describe of water.

Lana: It does. It is water in the river. (Student focus group, 23/09/2020)

This discussion demonstrates that sometimes pictures failed to help students with their Hanzi learning because they could not find the connections. Although one student claimed that 水(water) can be related to the fluidity of water in nature, other students did not agree. It was also interesting that no one made mistakes with 山(mountain). Therefore, it could be concluded that students tend to make fewer mistakes on characters easily linked to their images.

Table 5.4 Students' mistakes on the first task

Student	Mistakes
1	云(cloud)、水(water)、日(sun)、月(moon)
2	云(cloud)、水(water)、日(sun)、月(moon)
3	云(cloud)、雨(rain)
4	云(cloud)、雨(rain)
5	云(cloud)、水(water)
6	水(water)、雨(rain)

The second task of this worksheet was writing Hanzi on the line according to the picture (see Appendix F). The results showed that only nine students finished on time. Five students did it correctly; another four students made small mistakes on some particular characters, mainly on 日(sun) and 月(moon) (see Figure 5.8). All four of these students had no difficulty writing 云(cloud), 山(mountain), 水(water) and 雨(rain). The students are used to icons such as lighting and clouds in weather reports. However, they all got confused about the Chinese characters of 目(eye), 日(sun) and 月(moon). This might be due to the strong similarities between them. In addition, 13 students (six boys and seven girls) were not able to complete this practice. Possible factors for these results include: 1) a recess came after this Mandarin class, and some students became so excited that they could not concentrate well; and 2) the students who did not engage cognitively in Mandarin class failed to write the Chinese characters without modelling.

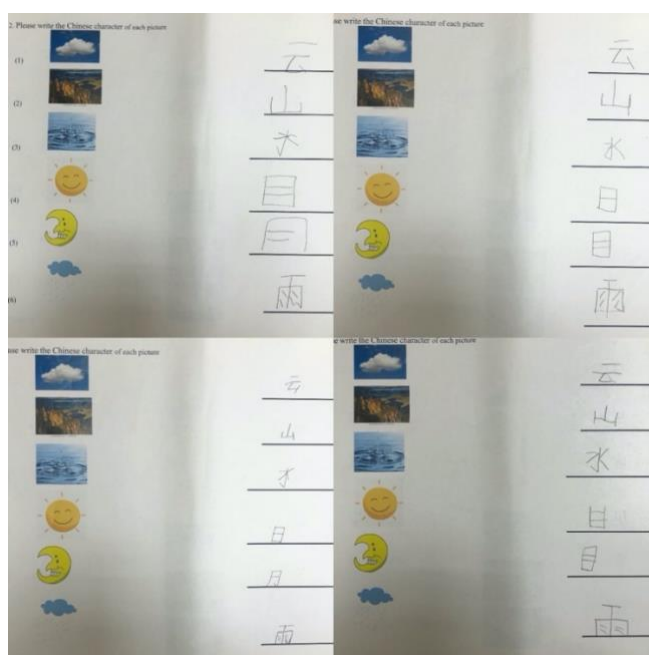


Figure 5.8 Students' mistakes on the second task

5.3.2 *Creating pictographic characters*

Creating pictographic characters was another formative assessment activity that helped to develop students' expression (Jolley et al., 2004) and clarified whether they could engage cognitively. Children in Years 5 and 6 are able to express what they saw in the world without necessarily saying a word (Çetin & Güneş, 2021). Two participants reported believing that this was a thoughtful activity to encourage students to be creative:

Interviewer: Do you think it can arouse students' cognitive engagement, through creating their words?

Amy: Yeah, I think it makes students more creative and thoughtful about why we come up with these symbols. I think it will make them use their cognitive thinking. (Third video interview, 15/07/2020)

Jean: Creating their own pictographic characters is kind of creation and it's kind of connection as well. I think it's pretty good for them to engage cognitively. (Third video interview, 22/07/2020)

Amy and Jean agreed that making Chinese pictographic characters was a thoughtful activity because the process of creating required students to engage cognitively.

It could also be argued that creating Chinese characters is a difficult task for Stage 1 students. When the teacher-researcher shared the lesson plan with Amy, she suggested it would not be too challenging as long as the students clearly understood what they needed to do:

Interviewer: For the activity of let students create their own pictographic characters, do you think it will be a very challenging activity for most of the students in Stage 1?

Amy: I think it depends how you let them know what they need to do. I think if you relate it to the previous lessons where this is how we came up with this symbol for sun and moon. Now it's your turn to come up with the symbol for star. You can be as creative as you want and to make your own symbol. It's about communicating to them exactly what they need to do, but also allowing them to be creative and imaginative with it. And as I said, some will find it easy and others will find it difficult. Some kids just like to see how the teacher does things. They have trouble when thinking for themselves. They're the ones that you could just show other examples from the class and say, this is what someone else is done. Could you do something similar? And if

they end up copying someone else's, that's fine. It doesn't matter. I don't think it's a difficult activity. But some children are always going to find things more challenging than others. (Third video interview, 15/07/2020)

The classroom teacher suggested a need for the Mandarin teacher to make connections to the former lesson when conducting this activity. Students learned 日(sun) in the fifth lesson and 月(moon) in the sixth lesson. To arouse their cognitive engagement, they were asked to design a Chinese pictographic character for 'star' at the end of the sixth lesson. Further, she suspected that not all students were able to manage this task. Therefore, students who had trouble engaging in individual thinking were allowed to copy from the teacher-researcher or their classmates. Maria offered a similar opinion:

Interviewer: Basically, for Stage 1 students, do you think creating pictographic characters by their own will be very challenging for them?

Maria: Yeah. But it's a good task. I think you should do it. It's just that they'll need more guidance and structure and definitely giving them the option of copying yours. Like saying 'This is my one. If there's anyone that's not sure or you are not confident to have a go, you can copy my one. it doesn't matter'. Like if they can't do it, maybe they'll be able to do it the next week. (Third video interview, 07/07/2020)

In one specific lesson, the teacher-researcher received some creative answers from several students (see Figure 5.9).



Figure 5.9 Creative work from students

Some students created their pictographic characters according to the star's shape (see the top two examples in Figure 5.9). They used several straight lines to compose a symbol to

represent the Chinese character of star. One student even used a square to surround the star, which demonstrated the student engaged in cognitive thinking.

When I asked her how she came out this, she explained that she imagines herself look at the star through the window. This is why she used a square. When the classroom teacher heard about this, she said she was impressed by this unique answer. (Reflective journal, 23/09/2020)

Conversely, other students adapted the Chinese character of ‘moon’ to ‘star’ (see the bottom two examples in Figure 5.9). Most of them added a line in the middle or changed the direction of the hook. This demonstrated their connection with what they learned in previous lessons, which also showed their cognitive thinking abilities. However, it cannot be ignored that overall, some students had trouble creating their characters. Seven students only drew pictures of stars on their whiteboard, which meant almost 68% of the students could use their cognitive thinking when asked to design Chinese pictographic characters.

5.4 Interaction of all the teaching strategies

Based on what has been discussed above, it could be seen that strategies applied in real-context teaching were found effective in improving student classroom engagement. First, game-based learning increased students’ emotional engagement by entertaining them and stimulating their interest. Then, the consequent result was students’ behavioural engagement had been enhanced. Second, drawing pictures triggered the students’ interest and increased their behavioural engagement cognitive engagement because they liked drawing and could find connections between the Chinese pictographic characters and their images. Third, videos served as digital and visual aids promoted emotional engagement and cognitive engagement. In this study, all of the above methods worked separately but also have combined to improve the student learning.

5.5 Conclusion

This chapter focused on the real teaching context at RPS. It mainly discussed evidence of learning upon application of several codes, including game-based learning, drawing pictures, watching YouTube videos and practice writing. Based on the analysis of the students’ reflection, focus group interview, worksheet results and the teacher-researcher’s self-reflective journal, it is found that this unit of work positively impacted student

engagement following the topic of pictographic characters and suggestions from three experts. However, it is noted that the main difficulty was guiding students to write in the correct order.

Chapter 6: Discussion and Conclusion

6.0 Introduction

This chapter reviews the main content of Chapters 1–5 and then illustrates the study's key findings by answering the three research questions. Lastly, it points out the limitations of this study and recommendations for further research.

6.1 Overview of the Research

This research project focused on constructing a localised unit of work by adopting suggestions from local teachers and then applying six lessons for a Stage 1 class within the context of a Western Sydney public school. A case study methodology and qualitative data analysis were adopted in this research. The six chapters of this thesis are summarised as follows.

Chapter 1 introduced the background of this study. In light of the issues related to teaching Hanzi to non-background learners, this study aimed to design a unit of work that could engage Stage 1 students in Western Sydney Mandarin classes following the theme of pictographic characters. Chapter 2 reviewed the literature on four aspects. First, it introduced the development of schema theory; second, it defined Chinese pictographic characters. Third, effective approaches with young learners learning second languages were introduced and reviewed. Then it stated the definition of student engagement and illustrated three dimensions of it. Lastly, gaps in previous studies were reviewed. Chapter 3 stated the methodology used in this case study research. It pointed out the object of this case study, which was a unit of work about Chinese pictographic characters. It also illustrated the research site and the participants. Following this, the chapter discussed the data collection methods and data analysis process. Principles of research, including ethical issues, reliability and validity and generalisation were also discussed. Chapters 4 and 5 are two analysis chapters that focused on several codes and implementing the prior six lessons. The last chapter of this study is the discussion and conclusion chapter. Limitations and recommendations of this research for further studies are also presented in this chapter.

6.2 Key Findings of the Study

A guideline for designing a Chinese unit of work for stage one students is provided in Appendix H. Table 6.1 illustrated how codes answer the research questions. Each code contributed to the first research question; four codes mainly answered the second research question, and another four codes referred to the third research question especially. The key findings of the study are listed in the following sections.

Table 6.1 How codes answer research questions

	Age-appropriate content	Consistent lesson structure	Game-based learning	Drawing, pictures, engagement	Watching YouTube videos	Practice writing	Exit slip	Storytelling
RQ1	√	√	√	√	√	√	√	√
RQ2	√	√					√	√
RQ3			√	√	√	√		

6.2.1 How may a teacher-researcher design a unit of work that can engage Stage 1 students in Western Sydney Mandarin classes following the theme of pictographic characters?

The whole unit of work (see Appendix G) provides a reference for novice or student teachers to teach Hanzi to Stage 1 students in an Australian context. The effective strategies offered by three experts could also be applied in other second language teaching circumstances to enhance classroom engagement in Western Sydney. The teacher-researcher illustrated three factors that should be considered when designing a unit of work to engage Stage 1 students.

First, this study generally supports that Chinese pictographic characters could be selected as an introductory unit when teaching Hanzi to Stage 1 students. They are the Hanzi that capture the imagination of foreign language learners, and they help long-term memory retention (Shen, 2010). Once the connection between the Chinese character and its image was made, students could remember the meaning until the end of the term. This aligns with Luk and Bialystok's (2005) findings that picture-based Chinese characters can help to understand and remember Hanzi.

Second, short and simple competitions more easily arouse student emotional engagement. Data from the student focus group, exit slips and teacher-researcher's reflective journal

showed that many students had strong interests in the game ‘60 seconds dash’. Compared to other games in this unit of work, this game was more competitive because it clearly told the class who the quickest person was within one minute, and most of the students had a strong desire to ‘win’. This suggests that when designing a unit of work or lesson plans, incorporating short and simple competitive games is useful for increasing student emotional engagement.

Third, students have different attitudes towards difficult characters (see Sections 5.1.2 and 5.2). Some students expressed that they liked the character of rain (雨) because it was the most difficult and they liked to challenge themselves. Conversely, some students in this class reported that they did not like the character of water (水) because it was difficult for them to remember the meaning. This indicates when students find something challenging or difficult, they tend to have less interest in it and are consequently less engaged. This result suggests that differentiation might be an important factor to consider when designing lesson plans.

6.2.2 What helps Stage 1 students learn Chinese pictographic characters?

To address this research question, Chapter 4 was framed around suggestions offered by three interviewed teachers. Qualitative data collected from multiple aspects were analysed in Chapter 5 to understand what works in a real teaching context. The researcher linked the codes to the research questions. The three most influential strategies that helped engage Stage 1 students are as follows.

First, among the eight strategies classified in the study, games were found most effective in enhancing student emotional engagement. This finding aligns with Ying et al.’s (2016) claim that games can be useful methods to help learners sustain interest in learning Chinese as they can benefit students in terms of motivation (James & Mayer, 2019). To put it more simply, the learners mostly tended to participate and develop strong interests in Mandarin lessons when they were playing games (Chen, 2017). Moreover, students’ retainment of Hanzi was also facilitated by games (L. Xu, 2013) such as ‘swat a fly’ and ‘60 seconds dash’, which indicated that they engaged more cognitively.

Second, drawing pictures played an important role in engaging students. Data presented in Chapter 5 demonstrated that drawing enhanced student engagement from three dimensions. All students participated in this activity, which might be because drawing caters to Stage 1

students' interest. As children in Years 5 or 6 have established a repertoire of the things in their environment (Roland, 2006), the simplicity of the pictograph might appeal to children and accord with their cognitive characteristics (Wen & Lu, 2021). In addition, drawing pictures when learning Chinese pictographic characters certainly helps students to engage cognitively, as they were encouraged to build connections between their drawings and the specific pictographic characters. According to Han (2017), there is almost no transferability between English and Chinese: 'Hanzi is an orthographic language whereas English is alphabetic' (p. 55). Therefore, when transferability between the first language (English) and the second language (Hanzi) is limited, drawing might relieve the difficulty in understanding the meaning of the pictographic characters for English background students.

Third, watching YouTube videos served as a significant method to improve student engagement. Data presented in this research (see Section 5.1.3) suggests learning was effective when supported by visual and auditory aids. Animation in videos created positive emotions among students and established a pleasurable learning environment (Yuan, 2020). This also aroused their cognitive engagement (Chen, 2020) with how a picture became abstract and then developed into a character. Students engaged more visually when they watched the video together because of the enjoyable learning experiences. This is consistent with Cakir's (2006) assertion that video, as an audio-video material, has positive contributions to foreign language learning in terms of stimulating and facilitating the target language.

6.2.3 How will Stage 1 students engage in the Mandarin lesson when applying the unit of work?

The findings of Chapter 4 are from teachers' narratives alone rather than classroom interaction with student learning. Data presented in Chapter 5 provides a deep and comprehensive understanding of how three experts' strategies affect student engagement in the real teaching context.

First, it is noted that multiple dimensions of engagement always appeared simultaneously (see Section 5.1.1). That is, when students were emotionally engaged, they were also behaviourally and cognitively engaged. For example, when students were playing games, they tended to engage emotionally; consequently, their behavioural engagement was enhanced. Then, the sense of achievement gained from the games also improved their positive emotions in learning Mandarin. It was also found that comprehensive high

engagement often starts by increasing emotional engagement. Students would concentrate more when they were asked to do something that caters to their interest. This also addressed what Munns and Woodward (2006) have claimed as ‘the simultaneous coming together of the cognitive, the affective and the operative at high levels’ (p. 194).

Second, two shortcomings in teaching pictographic characters to Stage 1 students were identified. Many students failed to write six Hanzi completely. The characters with visual characteristics led to students successfully remembering the meaning of the Hanzi; for example, formative assessment results showed three-quarters of the students correctly matched the Chinese character and picture. However, less than a quarter of the students were able to write all the Hanzi completely correctly. This might be because the time allocated to formal writing (eight minutes for each Hanzi on average) was not enough for students to remember all the strokes in each Hanzi. Further, students did not always need to write in the games; instead, they might be asked to give the meaning of the word or identify (swat) the character. Conversely, it was found that pictographic characters only enhanced retention of the shape and meaning of abstract words but not the sound of them (Shen, 2010). Notably, English is a language that contains links between sound and meaning, but the Chinese language does not have such characteristics. Due to students being unable to build connections between the pronunciation and the Chinese character, it was difficult for them to remember the sound. In addition, letters in Pinyin are pronounced differently in English. Therefore, students tended to make mistakes by borrowing their original knowledge of English to spell the Pinyin.

6.3 Limitations

Three limitations are identified in this research. First, this study was limited to the sample size of one class and the type of school. It was confined to one classroom with 22 students at a public primary school in Western Sydney, which negates the ability to generalise the findings to a larger population.

Second, part of the data came from Stage 1 student reflections. Given that young learners at this age (6–7 years) are not practiced in self-reflections, not all students were able to provide valuable and effective feedback. Only some could do it in this particular class. Others were not yet able to critically think about this, which stopped the teacher-researcher gathering more useful data.

Third, the original research plan was to conduct the whole unit of work (see Appendix G) at RPS. However, as the COVID-19 pandemic restricted volunteer teachers from teaching in schools from March to July, the teacher-researcher only implemented six lessons in the school. This also meant it was not possible to examine how the code of storytelling impacts student engagement in Mandarin lessons.

6.4 Implications for Further Research

Based on the key findings of this case study, the teacher-researcher suggests future researchers apply characters with visual characteristics, or characters that can be linked to the real world as an introductory unit to help Stage 1 students learn a second language. Further, a number of areas that were not investigated in the present study could be reviewed in future research.

First, since the unit of work in this case study only focused on Chinese pictographic characters, future studies could explore other types of Hanzi, such as indicatives and associative compounds, to see how it impacts student engagement.

Second, as mentioned in Section 6.3, one of the limitations of this study resulted from the challenge to collect Stage 1 students' data. Thus, a further effort will need to be placed on the effectiveness of the focus group or student reflection among children to elicit more valuable and detailed information to answer the research questions.

Third, the writing order contained in Hanzi is considered one of the main difficulties for Stage 1 students in this unit of work. When some students wrote Hanzi, they did all the horizontal lines first and then all the vertical lines. This caused problems for the stroke order, and consequently, students failed to write the Hanzi correctly. Two strategies were tried, but they did not result in obvious improvement. This suggests a need for future researchers to determine some effective strategies to help learners master the correct order, such as creating a balance between writing with the correct stroke order and engaging children's imagination when learning new characters.

Fourth, the results of this study indicate that students developed a stronger impression of the meanings of Hanzi rather than its pronunciation. This might be due to the primary task for students in this unit was learning Hanzi with visual characteristics. Chinese people tend to learn the pronunciation, writing form and its meaning at the same time. However, it might

be easier for second language learners with limited time to learn the meaning first and then master the pronunciation. This means future research could explore the pedagogy of establishing the meaning of Hanzi before the sound. Future research might be able to establish that children in primary school in Western Sydney can master the pronunciation, meaning and writing if sufficient time were available. A long-term study could explore the influence of Chinese pictographic characters on students' higher-level language learning.

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Appendix A

Timeline for the research

	Aug–Oct 2019	Oct–Dec 2019	Jan–Mar 2020	Apr–June 2020	July–Dec 2020	Jan–Mar 2021
Determining the research questions	√					
Literature review	√	√	√	√	√	√
Methodology	√	√		√	√	√
CoC		√				
HREC application			√			
SERAP application				√		
Data collection					√	
Data analysis					√	
Draft thesis						√
Thesis submission						√

This timeline, as a flexible plan, may change with the particular circumstances when being undertaken.

Appendix B

Degree Outline of Chinese characters—Grade A

啊矮爱安吧八把爸白百摆班搬般板半办帮包饱抱报杯北
倍备被本比笔必边便变遍表别病播不布步部擦才彩菜参
操草层茶查差产常长厂场唱朝车晨城成吃持迟抽初出除
楚础处穿船窗床吹春磁词次从村错答打大戴带代单但蛋
当刀倒导到道得的灯等低地第弟点典电店掉调定丢东冬
懂动都读度短锻段对顿多饿而儿二发法翻烦反饭方房访
放非啡飞分丰封风夫服福辅府复傅父负富附该改概干感
敢刚钢高搞告哥歌个各给根跟更工公共够姑故顾刮挂关
观馆惯广贵国果过哈孩海寒喊汉好号喝和何合河黑很红
候后忽湖互户花画划化话坏欢还换黄回会活火或基机鸡
极集急级挤几己绩技济寄计记继纪家加假驾坚间检简践
见件健建将江讲蕉交脚角饺教较叫接街节结解姐界借介
斤今紧进近睛精经静净究久九酒旧就局橘桔举句觉决咖
卡开看康考棵科咳可渴克刻客课空口哭苦块快况困拉啦
来蓝篮览劳老乐累冷离理里礼历利例立力俩联连脸炼练
凉两辆亮谅了零领留流六楼路录旅绿乱论妈麻马嘛吗买
卖满慢忙毛冒帽么没每妹们米面民明名母目拿哪呐那
奶南男难呢内能嗯你年念娘您牛农努女暖爬怕拍排派旁
跑朋碰批啤篇片漂票苹平瓶评破期七其齐骑起器气汽铅
千钱前浅墙桥切且亲青轻清晴情请秋球求取去全确然让
热人任认日容肉如赛三散色山商上烧少绍舍社设身深神
声生省剩胜师十拾时什食实识史使始示世事是适市室视
试收手首输舒书熟术树束数双谁水睡说思死四送嗽宿诉
酸算虽岁所他它她抬太态谈汤堂糖躺讨特疼踢提题体天
条跳听停庭挺通同痛头突图团推腿退脱袜外玩完碗晚万
往望忘危围为伟喂位文闻问我握屋五午舞物务误西息希
习喜洗系细下夏先险现相香想响像向消小校笑些鞋写谢
辛新心信星兴行幸姓休需须许续学雪呀研言颜眼演宴验
扬羊阳样药要也页业夜一医衣宜椅己以艺易亿意义谊译
因音阴银英应迎赢影泳永用尤邮游有友右又鱼愉雨语遇
育预元原园员圆远愿院月云运杂再在咱脏早澡责怎增展
占站章张掌找照者这真整正政支知之织直指只纸志治中
钟种重周猪主助住注祝装准桌着子自字总走租足族祖组
嘴最昨左做作坐座

Appendix C

YouTube clips for 10 Chinese pictographic characters

山(mountain)	https://www.youtube.com/watch?v=deWBixSQ8qA&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=11
云(cloud)	https://www.youtube.com/watch?v=PkJawu1MpAg&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=14
水(water)	https://www.youtube.com/watch?v=jHdMRXTO_IM
雨(rain)	https://www.youtube.com/watch?v=fnHh9VWDccM&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=84
日(sun)	https://www.youtube.com/watch?v=yBDsHdcV1oU&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=21
月(moon)	https://www.youtube.com/watch?v=yBDsHdcV1oU&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=21
人(people)	https://www.youtube.com/watch?v=oGRpOVMcBg4&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh
目(eye)	https://www.youtube.com/watch?v=MOIHsNYfpHE&list=PL7p1hVQ2pMeWVu9nUbQgxUyEWbXag9jLh&index=44
口(mouth)	https://www.youtube.com/watch?v=SRoCopApG18
手(hand)	

Appendix D

Worksheet activity (Part 1)

Please circle the word which contains the character of water

水果	山峰	水花	白酒
云朵	水枪	高山	流水
盐水	溪流	白云	果汁
河流	小溪	矿泉水	海岸

Appendix E

Worksheet activity (Part 2)

1. Matching game

(1) Sun		月
(2) Mountain		水
(3) Cloud		山
(4) Water		雨
(5) Rain		云
(6) Moon		日

2. Please write the Chinese character of each picture

←



(1)

_____ ←



(2)

_____ ←



(3)

_____ ←



(4)

_____ ←



(5)

_____ ←



(6)

_____ ←

←

←

Appendix F

The unit of work

Lesson Plan 1

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 山(mountain) & 云(cloud)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、日(ACLCHU011)			
Chinese language learning focus:		Intercultural link:	Resources/Equipment:
1. 山/ Shān/ Mountain 2. 云/ Yún/ Cloud		Different words origin	Whiteboard, PowerPoint, YouTube Video
Time guide	Content: What is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
5 min	Definition of Chinese pictographic characters	Explain the topic ‘Chinese pictographic characters’ and presented a video	Understanding original Chinese characters were pictographs which conveyed meaning through physical resemblance to physical objects
1 min	Learning objectives of this term	Show the teaching content table of each lesson to students	Becoming clear about their learning task of this term
2 min	Students draw the mountain	Instruct students to draw the mountain; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 山 (mountain)	Play the video	Knowing how the Chinese character of mountain developed from its image; Knowing how to pronounce the word 山
5 min	Students write the character of mountain	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of mountain
2 min	Students draw the cloud	Instruct students to draw the cloud; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge

4 min	Present a video about 山 (mountain)	Play the video	Knowing how the Chinese character of cloud developed from its image; Knowing how to pronounce the word 云
5 min	Students write the character of cloud	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of mountain
1 min	Ending routine		
	Student learning activities 1. Drawing pictures 2. Watching videos 3. Writing		
Assessment strategies:			

Lesson Plan 2

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 水(water)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、日(ACLCHU011)			
Chinese language learning focus: 水/ Shuǐ/ Water		Intercultural link: Different words origin	Resources / Equipment: Timer, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
10 min	Play a game: 60 seconds dash	Teacher gives students 2 minutes to write the word 山/ 云 as much as they can (one minute for each word), student who write fastest will be the winner and will be rewarded by small gifts	Recall what has been taught from the last lesson
5 min	Students draw water	Instruct students to draw the water; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 水 (water)	Play the video	Knowing how the Chinese character of water developed from its image; Knowing how to pronounce the word 水
5 min	Students write the word of water	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of water
4 min		Ask students to think about the function of the water	Strengthen their memory of water
1 min	Ending routine		
	Student learning activities 1.Drawing pictures 2.Watching videos 3.Writing 4.Playing games 5.Discuss the function of the water		
Assessment strategies: The game ‘60 seconds dash’			

Lesson Plan 3

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 雨(rain)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: (ACLCHU011)			
Chinese language learning focus: 雨/ Yǔ/ Rain		Intercultural link: Different words origin	Resources / Equipment: Post-it notes Worksheets, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
5 min		Circle the characters which contains the character of 水	Recall what has been taught from the last lesson
5 min	Students draw the rain	Instruct students to draw the rain; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
5 min	Present a video about 雨 (rain)	Play the video	Knowing how the Chinese character of rain developed from its image; Knowing how to pronounce the word 雨
6 min	Students write the word of rain	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of rain
7 min	Students do an exit slip	Give out post-it notes to students and explain the questions	Learning how to reflect
1 min	Ending routine		
	Student learning activities 1.Drawing pictures 2.Watching videos 3.Writing 4.Circling word 5.Exit slip		
Assessment strategies: Word circling			

Lesson Plan 4

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 日/Ri/ Sun			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: (ACLCHU011)			
Chinese language learning focus: 日/Ri/ Sun		Intercultural link: Different words origin	Resources / Equipment: Post-it notes Ball, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
8 min	Review 4 characters of mountain, cloud, water and rain	Students sit in a circle. When the teacher plays a Chinese song, students will pass the ball. When the music stops, students who hold the ball should pronounce one of the four characters and explain the meaning of it	Recall what has been taught from the last three lessons
3 min	Students draw the sun	Instruct students to draw the sun; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
5 min	Present a video about 日 (sun)	Play the video	Knowing how the Chinese character of rain developed from its image; Knowing how to pronounce the word 雨
5 min	Students write the word of sun	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of sun
7min	Students do an exit slip	Give out post-it notes to students and explain the questions	Learning how to reflect
1 min	Ending routine		
	Student learning activities 1.Drawing pictures 2.Watching videos 3.Writing 4.Playing a game 5.Exit slip		
Assessment strategies: The game 'passing the ball'			

Lesson Plan 5

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to write 月(moon)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: (ACLCHU011)			
Chinese language learning focus: 月/ Yuè/ Moon		Intercultural link: Different words origin	Resources / Equipment: Post-it notes Ball, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	
8 min	Review character: 山/ Shān/ Mountain 云/ Yún/ Cloud 水/ Shuǐ/ Water 雨/ Yǔ/ Rain 日/Rì/ Sun	Students play a game called 'Can you read my mind'	Recall what has been taught from the former lessons
3 min	Students draw the moon	Instruct students to draw the moon; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
5 min	Present a video about 月 (moon)	Play the video	Knowing how the Chinese character of moon developed from its image; Knowing how to pronounce the word 月
5 min	Students write the word of moon	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of moon
7 min	Students do an exit slip	Give out post-it notes to students and explain the questions	Learning how to reflect
1 min	Ending routine		
	Student learning activities 1.Drawing pictures 2.Watching videos 3.Writing 4.Playing a game 5.Exit slip		
Assessment strategies:/			

Lesson Plan 6

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: Students have a review of what has been taught of last five lessons			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、日(ACLCHU011)			
Chinese language learning focus: 1.山/ Shān/ Mountain 2.云/ Yún/ Cloud 3.水/ Shuǐ/ Water 4.雨/ Yǔ/ Rain 5.日/Rì/ Sun 6.月/ Yuè/ Moon		Intercultural link: Different words origin	Resources / Equipment: Worksheets, Badminton bat,
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
10 min	Characters they've learned from lesson1-lesson5	Teacher guides students to play a game of 'swat a fly'	Students consolidate their learning
10 min	Students need to finish a match game: drawing lines English, picture and Chinese character on a worksheet; Write Chinese character: Students need to write the Chinese character of each picture.	Teacher gives out the worksheet and asks students to finish it individually	Students consolidate their learning
8 min	Students create their own pictographic characters related to star	Explain the activity	Students learn to be imaginative
1 min	Ending routine		
	Student learning activities 1.Worksheet 2.Creating pictographic characters 3.Playing a game		
Assessment strategies: Worksheet practice			

Lesson Plan 7

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 人(people) and 目(eye)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、 目(ACLCHU011)			
Chinese language learning focus: 人/Rén/People 目/ Mù/ Eye		Intercultural link: Different words origin	Resources / Equipment: Whiteboard PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
2 min		Teacher gives a simple introduction that students will learn pictographic characters related to human body in the coming weeks	Becoming clear about the upcoming learning tasks
3 min	Students draw person	Instruct students to draw the mountain; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 人 (person)	Play the video	Knowing how the Chinese character of person developed from its image; Knowing how to pronounce the word 人
5 min	Students write the character of 人	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of person
4 min	Students draw the eye	Instruct students to draw the eye; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 目(eye)	Play the video	Knowing how the Chinese character of eye developed from its image; Knowing how to pronounce the word 目
6 min	Students write the character of eye	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of eye
1 min	Ending routine		
	Student learning activities 1.Drawing pictures 2.Watching videos 3.Writing		
Assessment strategies:			

Lesson Plan 8

Topic: Simple Chinese pictographic characters		Class: Stage 1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 口/Kǒu/Mouth			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、目(ACLCHU011)			
Chinese language learning focus: 口/Kǒu/Mouth		Intercultural link: Different words origin	Resources / Equipment: Pasta, Whiteboard, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
6 min	Review 2 characters: 1. 人/Rén/People 2. 目/Mù/ Eye	Teacher guide students to use pasta to write these two characters	Recall what has been taught from the last lesson
5 min	A story relates to person, eye and mouth	Teacher tell a story relates to person, eye and mouth	Develop a stronger memory of three Chinese characters
3 min	Students draw a mouth	Instruct students to draw a mouth; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 口 (mouth)	Play the video	Knowing how the Chinese character of mouth developed from its image; Knowing how to pronounce the word 口
5 min	Students write the character of 口	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of mouth
5 min	Play a game	Guide students to write on someone's back	Strengthen their knowledge of
1 min	Ending routine		
	Student learning activities 1. Drawing 2. Writing 3. Using pasta to make a word 4. Write on someone's back		
Assessment strategies:			

Lesson Plan 9

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: The students will learn to how to pronounce and write 手(Hand)			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、 日(ACLCHU011)			
Chinese language learning focus: 手/ Shǒu/ Hand		Intercultural link: Different words origin	Resources / Equipment: Colourful pencils, String Whiteboard, PowerPoint, YouTube Video
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
8 min	Review characters: 人/Rén/People 目/ Mù/ Eye 口/Kǒu/Mouth	Teacher guide students to use colourful pencils to write the Chinese characters	Recall what has been taught from the last lesson
4 min	Students draw a hand	Instruct students to draw a hand; pick a volunteer to draw on the big whiteboard at the same time	Strengthen their original knowledge
4 min	Present a video about 手(hand)	Play the video	Knowing how the Chinese character of hand developed from its image; Knowing how to pronounce the word 手
6 min	Students write the character of hand	Show students how to write the word in a correct order and instruct them to practice	Knowing how to write the Chinese character of hand
6 min		Guide students to use string to make this new character	Have a strong memory of the new character
1 min	Ending routine		
	Student learning activities 1. Drawing 2. Writing 3. Rainbow writing		
Assessment strategies:			

Lesson Plan 10

Topic: Simple Chinese pictographic characters		Class: Stage1	
Class Time: 30mins			
Rationale: Students have a review of what has been taught of last five lessons			
Syllabus Outcomes: A student: › recognise Hanzi as a form of writing and Pinyin as the Romanised spelling of the sounds of Chinese, for example: recognising that each Hanzi has meaning, and exploring the connection between meaning and form in pictographs, e.g., 人、目(ACLCHU011)			
Chinese language learning focus: 1.人/Rén/People 2.目/ Mù/ Eye 3.口/Kǒu/Mouth 4.手/ Shǒu/ Hand		Intercultural link: Different words origin	Resources / Equipment: Worksheets, PowerPoint, Badminton bat,
Time guide	Content: what is being taught?	Strategy: How will you deliver the content?	Student Learning Outcomes
1 min	Greeting	Pick a monitor; Greet with students	Having a sense that Mandarin lesson begins
5 min	A story relates to person, eye, mouth and hand	Teacher tell a story relates to person, eye, mouth and hand	Develop a stronger memory of four Chinese characters
9 min	Characters were learned from lesson7-lesson9	Teacher guide students to review each character they've learned from lesson7-lesson9. Teacher show the picture of the character on the PowerPoint first, then let students to say the Chinese character. Then they need to write each character on their whiteboard	Student realise how much they have mastered so far
5 min	Students need to finish a simple worksheet practice	Teacher gives out the worksheet and asks students to finish it individually	Student consolidate their learning
9 min	Characters they've learned from lesson1-lesson5	Teacher guides students to play a game of 'swat a fly'	Students consolidate their learning
1 min	Ending routine		
	Student learning activities 1.Listen to a story 2.Worksheet activities 3.Swat a fly		
Assessment strategies: Worksheet practice			

Worksheet Practice

1. What does Chinese character 人 mean in English?
 - A. Son
 - B. People
 - C. Eye
 - D. Tree
2. What does Chinese character 目 mean in English?
 - A. Mouth
 - B. Ear
 - C. Face
 - D. Eye
3. What does Chinese character 口 mean in English?
 - A. Square
 - B. Close
 - C. Door
 - D. Mouth
4. What does Chinese character 手 mean in English?
 - A. Hand
 - B. Foot
 - C. Arm
 - D. Finger

Appendix H

A guideline for designing a Chinese unit of work for stage one students

1.Choosing Hanzi that capture the imagination of students.
2.Choosing appropriate content that accord with student age.
3.Designing consistent lesson structures.
4.Applying drawing as a learning method.
5.Presenting pictures to help students to build new knowledge.
6.Applying videos as a teaching aid.
7.Using games, especially competitive games to engage students.
8.Combining both formal writing and informal writing in learning Hanzi.