A Phenomenographic Study of the Learning and Teaching of Chinese Characters to Non-Chinese Speaking Preschool Children

by

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Statement of Originality

I, NG, Po Kuen Emmy, hereby declare that I am the sole author of the thesis and the material presented in this thesis is my original work except those indicated in the acknowledgement. I further declare that I have followed the University's policies and regulations on Academic Honesty, Copyright and Plagiarism in writing the thesis and no material in this thesis has been submitted for a degree in this or other universities.

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Abstract

In Hong Kong children aged 4-6 years old are taught Chinese characters writing in local preschools. Non-Chinese speaking (NCS) preschool children are affected by the differences between their mother language and Chinese when they are given similar Chinese writing exercises in the preschools. This study aimed to investigate how Chinese preschool teachers taught Chinese characters writing in local preschools and how NCS preschool children learnt to write Chinese characters in an authentic classroom. Three parts of 'Object of Learning' were employed in this phenomenographic study. The first part was 'Intended Object of Learning', in which data were collected through semi-structured interviews with participating teachers. It aimed to study the teachers' understanding of the teaching of character writing to the preschool children. The second part was 'Enacted Object of Learning', whose data were recorded by the researcher about how the teachers implemented their character writing activities in the class. The third part, 'Lived Object of Learning' concerned how the NCS children, who were 5 to 6 years old, performed after they had experienced the character writing activities.

This study investigated the mentioned experiences of teachers and NCS children of upper level in 3 local preschools. A total of 4 preschool teachers and 12 NCS preschool children participated in this present study. The time period was twice a week, especially during their daily Chinese character writing demonstration times, for twelve consecutive weeks. The researcher used various methods to collect data, including video- and audiotaping, field notes, photographic documentation, collection of lesson plans and interviews.

The findings were compiled using 'Categories of Descriptions', which reflected the preschool teachers' and NCS preschool children's ways of seeing Chinese characters writing in their daily classroom experiences. In the first part of the findings five teachers'

conceptions from their understanding (Intended Object of Learning) were identified, and they are (1) to use characters in daily lives, (2) to understand the structure of characters, (3) to foster children's interest in writing characters, (4) to help children build self-confidence, and (5) to promote the Chinese culture. In the second part of the findings four teachers' conceptions from their enactment (Enacted Object of Learning) were identified. The four conceptions are (1) to provide a meaningful context for children to connect with their classroom experience, (2) to analyze the structure of written characters, (3) to demonstrate how to write characters inside square frames, and (4) to provide the opportunities for children to participate in the writing demonstrations on the whiteboard. In the third part of the findings three children's conceptions from their perspectives (Lived Object of Learning) were identified. The three conceptions are (1) to be able to connect with their daily lives, and (2) to complete the tasks assigned by the teachers, and (3) to be integrated into the identity group. The result of this study can enhance educational practitioners' understanding of the teaching of Chinese character writing to NCS preschool children in local preschools.

Keywords: phenomenography, character writing, preschool children, teaching and learning

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List of Abbreviations

EdB   Education Bureau

EdUHK   The Education University of Hong Kong

EOC   Equal Opportunities Commission

IPA   Integrative Perceptual Approach

L1   Learning First Language

L2   Learning Second Language

NCS   Non-Chinese Speaking

SLA   Second Language Acquisition

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Chapter 1: Introduction

1.1 Introduction

This introductory chapter sets out the orientation of this study and indicates the research questions that investigated non-Chinese speaking (NCS) preschool children in terms of Chinese character writing learning. The background of the research topic as well as the purpose of this study will be explained. In the final section an outline of the thesis will be presented, including summaries of the contents and major focus of each chapter.

1.2   Background

According to the 2011 Population Census, 93.6 % of Hong Kong's population is ethnically Chinese. The number of people of 'Non-Chinese ethnicity' is 451183 or more than 6.4 % of the population (Census and Statistics Department 2011).   The term 'non-Chinese ethnicity' was first mentioned in the population report 'Thematic Report Ethnic Minorities' by the Census and Statistics Department in December 2002, and the term "ethnic minority" applies to people of non-Chinese ethnicities in Hong Kong.   Students who are of non-Chinese ethnicity are named by the Education Bureau (EdB) as non-Chinese speaking (NCS) students (Chan, 2013a).   They have right of abode and are entitled to free education in the public sector from preschool to secondary level.   The largest ethnic minority groups in Hong Kong include Nepalese, Pakistanis and Indians, whose ancestors migrated to Hong Kong for a variety of reasons in the age of British colonization.   For example, the Nepalese came to Hong Kong to serve in the British military forces.   Many Pakistanis and Indians came here to serve in the Hong Kong Police Force. The ethnic minority students used to enroll in government funded schools which were called 'designated schools' before the school year of

2013-14 (Development Bureau, 2013). The NCS students whose mother tongue is not Chinese and who do not possess the necessary level of Chinese for everyday communication learn Chinese as a second language.

There has been an increase in the number of local studies (Loper 2004; Ku et al., 2005; Carmichael, 2009; Unison, 2001; Unison, 2002; EOC, 2012) targeting ethnic minorities in the last decade in Hong Kong. The research reveals the challenges faced by minority ethnic groups at different stages of the education system. As most of the NCS students were educated in the 'designated schools' where the majority of their classmates were from similar ethnic backgrounds, throughout their school life from primary to secondary (Loper 2004; Ku et al., 2005; Carmichael, 2009), the NCS students experienced a lack of opportunities to learn Chinese in a natural social context. In 2012, a study published by the Equal Opportunities Commission (EOC), reported that there was no noticeable increase in enrollment of the percentage of NCS students from ethnic minorities getting a place in tertiary institutions. The most important reason was that the NCS students' progress was frustrated by their low attainment in Chinese language which had dragged down their examination results and overall academic attainment (EOC, 2012a). The Ombudsman criticized the EdB for failing to ensure that the teachers in 'designated schools' had received adequate specialized teaching knowledge. Although the teachers have been provided with additional short training programs related to *Teaching Chinese as a Second Language* (TCSL), these teaching training courses have been criticized as being too short and not comprehensive enough (EOC, 2012b). From the school year of 2013-14, the so-called 'designated schools' have been demolished (Development Bureau, 2013). All public sector schools and schools in the Direct Subsidy Scheme admitting 10 or more NCS students receive additional funding to support their NCS students in learning Chinese language. In

the 2014-15 school year, the EdB introduced the 'Chinese Language Curriculum Second Language Learning Framework' (Learning Framework) to primary and secondary schools. It aimed to support the Chinese teachers to help the NCS students learning Chinese as a second language. The EdB expected that the Learning Framework would enable NCS students to transition smoothly to mainstream Chinese Language classes (Legislative Council, 2014). However, the latest survey (Oxfam, 2016) received feedback from the teachers who taught the Learning Framework in the secondary schools, they reported that the curriculum was mainly an assessment tool used in measuring the NCS students. The content was too difficult to study because the Learning Framework aimed to prepare NCS students for taking the Hong Kong Diploma of Secondary Education Examination (HKDSE). It suggests the new curriculum from the EdB is still too difficult for the NCS students because the new curriculum is suitable for the native Chinese spoken language in learning Chinese. The survey (Oxfam, 2016) concluded that the new curriculum 'Learning Framework' was still not able to provide a solid Chinese second language curriculum for NCS students to learn Chinese effectively.

1.3 Statement of the Problem

According to the statistics from the EdB, in the Year 2014-15 there were 874 local preschools in Hong Kong, educating 176,395 children between the age of 3 and 6 (EdB, 2014). All preschools in Hong Kong are privately run and they can be categorized as the non-profit-making (NPM) preschools and the private independent (PI) preschools. All preschool children who were born in Hong Kong can enroll in the NPM preschools, regardless of their ethnicity. The EdB (2014) reported that there had been an increase in the number of NCS preschool children attending local preschools since the Pre-primary

Education Voucher Scheme was introduced in 2007. According to a survey by Lisenby (2011), parents of NCS children named 'language learning' and 'making friends' as the primary benefits their children might enjoy by attending local preschools. It has been recognized that NCS students can learn the Chinese Language effectively whilst listening to, speaking with and playing alongside Chinese speaking children (EdB, 2008). However they are likely to encounter difficulties in writing and reading Chinese (Loper, 2004; Ku, 2005; Carmichael, 2009; Lisenby, 2011), probably their mother tongue is not Chinese. At the same time, preschool teachers encountered a lot of difficulties when teaching Chinese to NCS children because they do not have specialized teaching knowledge (Hong Kong Unison, 2011; Tse et al., 2013) as mentioned. This suggests that their supportive mechanisms may be limited in scope. The focus of most local research has been on NCS students in secondary schools and primary schools (Loper, 2004; Carmichael, 2009; Unison, 2001; Chan, 2013a). Many NCS children begin their education in local preschools, and little investigation on this level has been done.

1.4   Purpose of Study

Nowadays, many NCS children begin their education in local preschools and learning Chinese is very important for their future cognitive and social development in Hong Kong (EdB, 2006). However, most previous studies have focused on the effectiveness of the Chinese curriculum or teaching strategies (Lee et al., 2011; Loh & Tse, 2012; Loh et al., 2013; Kwan, 2014), little qualitative research regarding Chinese learning at this level has been done.

Chinese character writing is widely recognized to be difficult because of the complicated stroke patterns (Chan, 1996). However, most past studies have focused on how children

learn characters (Chan & Louie, 1992; Chan et al., 2008; Chan 2013b).   Little research has been conducted on how preschool teachers teach preschool children to write characters in the classroom.   The present research endeavors to address the research gap by investigating how Chinese teachers teach Chinese character writing and how NCS preschool children learn to write characters in local preschools.   In fact, this is very important as character writing teaching and learning activities in the daily schedule do affect how preschool children learn to recognise characters especially when character writing activities are reported to take up most of the time in Chinese literacy activities in many preschools (Li & Rao, 2005).   In order to investigate how NCS children learn Chinese characters in local preschools, explicit evidence of these Chinese writing activities in the classroom setting needs to be collected. The participants were 12 NCS preschool children who were attending upper level (ranging from 5 to 6 years old) and their 4 Chinese teachers in three local preschools.   The time period was twice a week, especially during their daily Chinese character writing demonstration times, for twelve consecutive weeks.

Therefore, it is hoped that findings of this study will enhance educational practitioners' understanding of the experience of NCS children in learning Chinese characters in local preschools, and that ultimately the difficulties faced by these children and their teachers in terms of the teaching and learning of Chinese character writing may be addressed .

1.5   Research Questions

In order to find out how the NCS preschool children learnt Chinese character writing in the local preschools, three research questions were formulated:

1. What do the Chinese teachers intend to teach? In other words, what are the purposes of the teaching activities?

2. What do the Chinese teachers enact in their Chinese teaching in the classrooms? In other words, what activities do the teachers implement in the class?

3. What are the preschool NCS children able to perform after the teaching of their Chinese teachers in the class? In other words, what do the character recognitions of the NCS preschool children look like after engaging in the Chinese teachers' teaching activities?

1.6 Principles on Teaching Chinese Characters for Preschool Children

Preschool education is important and learning a language lays the foundation for future cognitive and social development (EdB, 2006).   The Guide to the Pre-primary Curriculum (EdB, 2006) states five principles for the teaching of characters to preschool children and they are as follow:

(1) Teachers may make use of words in everyday life contexts;

(2) Teachers should cultivate children's interest and ability in expressing their ideas and experiences through pictures and words;

(3) Teachers should not force children to write with pencils/pens if they are not ready. They can train their basic skills through a variety of play activities involving fine motor skills and eye-hand co-ordination;

(4) Teachers should guide children to pay attention to characters/words, especially their structure, that appear in their surrounding environment.   They may design a variety of play activities that deal with the structure of characters/words, such as strokes or components, to promote children's writing skills.

(5) Teachers should encourage children to build up their self-confidence by providing them with opportunities to share their writing with others.

The core value of the Pre-primary Curriculum is child-centeredness – children are at the core

of the learning process (EdB, 2006). Also, the teaching of Chinese character writing is related to the emotional development of children, as seen from Principles (2) & (5); the cognitive development of children, as seen from Principles (1) & (4), as well as their physical development (Principle 3). In other words, the curriculum guidelines help establish the relationship between children's language development and other developmental aspects.

Appendix 5 of the curriculum guideline (EdB, 2006) includes more details of the implementation of the teaching of character writing in class. It recommends teachers to introduce character writing at upper preschool level since most children already possess writing readiness by that age. It also suggests five general principles on selecting suitable Chinese characters for preschool children, and these principles are based on the structure of Chinese characters. For example, it is stated that the selected characters should have fewer and more simple strokes, such as vertical or horizontal lines. The guideline also focuses on teacher-children relationship in the teaching of character writing. First, it is suggested that the selected characters should be considered to be easier for children to write, which informs teachers' decisions. Also, children should be taught to write characters precisely. In other words, teachers are to accurately present the written character forms to children. Last but not least, teachers are reminded not to expect children to compose with all the strokes in the correct positions because this is not easy for most children. It seems right to assume that teachers should possess the professional knowledge in teaching characters to children. Unfortunately it has been reported that some teachers have indeed requested children to reproduce their Chinese character handwritings in exactly the same form as their teacher's written form, in a past assessment report by EdB (2005). It can be seen clearly from the preschool curriculum guideline that the task of character writing teaching is not as merely demonstrating precisely how to write the written form of the characters to children. On top

of that, teachers have to be sensitive both to the children's ability and their emotions when they learn to compose characters with strokes.

1.7   Curriculum in Local Preschools in Hong Kong

In Hong Kong, the majority of residents, 89.5 % of the population, speak Cantonese in oral communication (Census and Statistics Department, 2011).   Naturally, Cantonese is most Hong Kong children's mother-tongue and the medium used in preschools (EdB, 2006).   The children study 3-hour sessions in the preschools which are using Cantonese as the medium of instruction.   It is a most common type of preschools in Hong Kong and they prepare the children for attending the local Chinese primary schools afterwards.

Unlike in Mainland China or Taiwan where Chinese characters in textbooks are printed with the phonetic system such as Pin-Yin or Zhu-Yin-Fu-Hao, only Chinese characters are found in reading materials that are commonly used in Hong Kong (Ho & Bryant, 1997).   Chinese preschool children are taught to read Chinese characters in Cantonese (Tse et al., 1995) and this is done without the support of a phonic transcription system (Ho & Bryant, 1997, Tse et al., 2007).   In the present study, Native Chinese speaking children refers to Cantonese-speaking children in local preschools.   Most of these children are taught Modern Standard Chinese in traditional graphemes (Tse et al., 1995).   With respect to Modern Standard Chinese, the graphemes of the characters can be a simplified form from Mainland China and a traditional form from Taiwan.   In Hong Kong, preschool children are often taught to read the graphemes of the characters in a traditional form at 3 to 4 years of age (McBride-Chang & Zhong, 2006).   In most preschools, Chinese literacy learning activities usually include character recognition, storybook reading, nursery rhymes and taught writing (Chan et al., 2008, Lee et al., 2011).   Preschool children learn Chinese characters directly

through their textbooks or by their presence in everyday rhymes known to the children.

However, it has been observed that preschool children in Hong Kong learn character recognition through other Chinese literacy activities far less than through pure writing activities (Li & Roa, 2005). The EdB actually reported that many preschools adopted writing and drilling characters in the teaching of Chinese character recognition (EdB, 2005). In other words, character writing activities take up most of the time in Chinese literacy activities in the preschool daily schedules.

1.8 Traditional Teaching Character Writing Approaches in Preschools

Most Hong Kong preschool children start to read Chinese characters when they are about 32 months old, in their first year in preschool (Chan & Chan 2003). Children are required to learn Chinese characters directly through textbooks or by their presence in everyday rhymes known to the children. The teachers introduce one to two new characters every day, pronounce them, and explain the graphic structure of the characters (Chan et al., 2008). Chinese teachers are encouraged to teach preschool children by the age of five to write Chinese characters in the marked big squares of exercise books because of children's readiness (EdB, 1996).

In terms of character writing approaches in preschool in Hong Kong, typical Chinese learning activities consist of guided writing lessons (Chan et al., 2008). During the guided writing lessons, children are required to sit together and pay attention to the teacher. The teacher uses the whiteboard to show how the characters are written. Although these traditional character teaching approaches have been criticized by various scholars (e.g. Tse et al., 2007; Chan et al., 2008; Lee et al., 2011; Chan, 2013) for being oversimplified in tackling the complicated character writing system, a recent survey (Tse el al., 2013) reported that 72.7%

of 1,200 preschool teachers employ a traditional teaching method known as "verbalizing stroke sequence" plus "imagine writing" with one finger to draw in the air（口唱書空法）. It means how the teachers teach the children to name the basic strokes and sequence rules, and demonstrate the character handwriting in the classroom.

To understand the ensuing discussion of children's experiences of learning Chinese character writing, it is necessary to first provide a brief introduction to the basic structure of Chinese character writing system. Chinese uses logograms which are written within imaginary rectangular blocks (Tse & Cheung, 2010). For this reason, preschool teachers usually employ a big marked square to demonstrate how to compose the strokes inside the square. Stroke is the small unit of the structure of characters and the number of strokes in a character can vary from one stroke to as many as 24 strokes (Chan, 1996). The average number of strokes in a character is 12 (Tse et al., 2007). The basic rules guide the writing of Chinese characters: (1) components are written top-left to bottom-right, (2) horizontal strokes are written before vertical strokes, (3) center components are written before their embellishments, and (4) small strokes are often written last (Honorof & Feldman, 2006). Another set of guidance of character writing, seven rules of stroke sequence is shown in Table (2) in P.12 by 許寶訓 (1983).

Components are structured by strokes (Chan, 1996). About 10% of characters are formed by one component (張志公, 1991; Chan, 1996; Chan, 2003; Lee et al., 2007; Chan et al., 2008). Characters that had one component are considered simple characters, and those with two or more components are known as compound characters. It also means that simple characters can be part of compound character's patterns and can be integrated in different characters to provide clues to the meanings and/or phonemes of the characters. About 90% of modern Chinese characters are formed with compound characters (張志公, 1991; Chan,

1996; Shu et al., 2003**).** Compound characters have certain configurations; consisting of two parts, three parts, and the surrounding. A total of thirty five types of compound characters are illustrated in the literature (黃耀樞,1997).

During the teachers' demonstration of the character handwriting on the whiteboard; the children follow the teachers to read aloud the names of the basic strokes and stroke sequences. The teachers use a table to show stroke sequences of the newly taught characters.   The table of stroke sequences is displayed on the whiteboard and also attached on the children's exercise books.   The purpose is to allow the children to follow the stroke sequences when they compose the character handwritings in their exercise books.   The following two tables in the following are showing the rules of the basic directions in Table (1) and the sample of the stroke sequence in Table (2) in P.12.

Table (1) The eight basic stroke types and the directions of the strokes

*(B*inyong & Rigsenow, 1994)
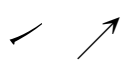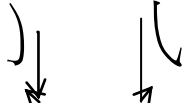
1. Point stroke (*Dim* 點)	5. Right falling stroke (*Naat* 捺)
2. Horizontal stroke (*Waang* 橫）	6. Rising stroke (*Tiu* 挑)
3. Vertical stroke (*Syu* 豎)	7. Cornering stroke (*Waan* 彎)
4. Left falling stroke (*Pit* 撇)	8. Hooked stroke (*Au* 鉤)

Table (2) The rules of stroke sequence　（許寶訓, 1983)

The rules	Example of stroke order in applying characters
1. Write from top to bottom 　　i.e. writing from the topmost stroke downwards	Character of 三 (three), from the top to the bottom. 一、二、三
2. Write horizontal strokes before the vertical one	Character of 十 (ten), 一、十
3. If a horizontal stroke forms the base of grapheme, that horizontal stroke should be written last.	Character of 土 (soil), 一、十、土
4. Write the left falling stroke first then the right falling stroke.	Character of 人 (people), ノ、人
5. Complete writing the left component first then the right one.	Character of 好 (good), 女、好
6. Finish the middle component first then writing the strokes on either side.	Character of 木 (wood), 一、十 、才、木
7. Where there is an enclosure structure, set up the outside first then finish the inside, and then finally complete the last horizontal stroke to close the rectangular grapheme.	Character of 田 (field), 冂、用 、田

Then the teachers also explain the meaning of the characters to the children before or after the character writing demonstrations (Chan, 1996, Ho & Bryant, 1997, Chan & Nunes, 1998, 2001, Ho et al., 2003). The characters are taught individually without any contextual background meaning. For this reason, Chinese teachers were criticized and encouraged to adopt a holistic approach in which children were prompted to memorize each character as a holistic unit (Ho & Bryant, 1997, Tse et al., 2007). Children are required to practice writing the newly taught characters in the following group sessions; they usually copy each character from the whiteboard into their exercise books three to five times in the class.

When the children are processing their character writing, the teacher walks around to check whether the grapheme is correctly written in exercise books marked with big squares. If the

character is not correctly written, individual guidance is provided. The teachers also ensure that the preschool children know the pronunciation of the characters after they have finished their writings.   Most preschool children pick up characters through orthography-phonology, meaning that they pronounce the characters through recognizing the graphemes of the characters (Lam,2012).   Finally, they take the exercise books home to repeat the character writing for around another 10 times for each character.

By five to six years of age, children are normally able to rote-write 50 to 60 characters and read 200 characters (Chan, 1996, Chan et al., 2008).   Before they start formal schooling, children are taught character recognition to serve as a foundation for subsequent learning.

1.9   Significance of the Present Study

The present research is significant in three ways. Firstly, it fills a research gap in terms of teaching and learning of Chinese characters in Hong Kong preschools as only a limited amount of research (Tse et al, 2007; Chan et al, 2008; Lee et al., 2011; Lam, 2012; Lam, 2014) has been undertaken on this.   Secondly, even when Chinese character learning is studied, the focus has been on local children. Much less research has been related to the teaching of Chinese characters to NCS preschool children in local Chinese preschools, and the present study also aims to close this gap.   Thirdly, the present study can enhance educational practitioners' understanding of some specific difficulties which may arise when teaching Chinese characters to NCS preschool children in the local preschools.

1.10   The Structure of This Thesis

This thesis consists of a further of five chapters.   First, background information of the NCS students and the teaching of character writing in local preschools in Hong Kong will be introduced, as the significance of the present study is related to enhancing educational practitioners' understanding of the experience of NCS children in learning Chinese characters in local preschools.   Chapter 2 examines the various language learning perspectives, as well as teaching and learning approaches.   These include acquisition of L2 in early years in the United States, NCS students and preschool children learning Chinese in Hong Kong, local Chinese preschool children learning characters, the character teaching approaches in Mainland China.   Furthermore, the past studies on learning conceptions of preschool children using the phenomenographic research approach will be highlighted. Phenomenography has been widely employed in the educational fields.   As the focus in this study is learning and teaching Chinese characters to NCS preschool children in local preschools, the review of some studies using a phenomenographic research approach is deemed relevant.   Chapter 3 explains why phenomenography is useful in investigations in Education.   It also describes the design of this study including details of the data collection and analysis procedures.   In addition, issues of the trustworthiness and ethics of the present study are discussed.   Chapter 4 presents the collected and analyzed data in terms of categories of description.   The results from the phenomenographical analysis are reported. Conceptions of character writing in teachers' and NCS preschool children's perspectives will be identified.   Chapter 5 discusses how the character writing teaching activities influence the NCS children's awareness.   Furthermore, since some character symbols were displayed in the classroom environment, what the NCS children as L2 learners leant from these characters through their daily experience will be discussed.   Links to the literature outlined in Chapter

2 are also made here.   The implications inform the teachers about the experience of the NCS children learning Chinese character writing in the local preschools.   Finally, Chapter 6 the key contributions of the present study, the limitations and directions for future research are discussed.   In conclusion, the main findings will be summarized about what conceptions of character writing of teachers' and NCS children's in local preschools in Hong Kong

Chapter 2: Literature Review

2.1   Introduction

In this chapter, the literature review consists of the following aspects.   The past studies were related on learning second language and ethnic identity.   The previous research reviews young children's experience in learning second language acquisitions in the English speaking countries. These studies were related to the multiracial background of students in the preschools.

The current research reveals the NCS students and childrens' experiences in teaching and learning Chinese in Hong Kong.   These research studies were related less to study how the NCS students and children experience teaching and learning characters.   Another aspect is to review how the local children learn characters in the preschools.   Furthermore, the character teaching approaches in Mainland China are reviewed because they provided the different teaching strategies in teaching character in the classrooms.

Then preschool children's conceptions of learning were studied with a phenomenographic approach because it aims to reveal what the children's views on 'Learning'.   A phenomenographic approach has been widely used in studying conceptions of learning and teaching in the educational field over a few decades.   A few past studies conducted with a phenomenographic approach contributed to this study some explicates reference to study teaching and learning characters in the preschool setting.

2.2   The General Concept of Second Language Acquisition

Ellie (2008) points out that the term 'Second Language Acquisition' (SLA) refers to the acquisition of any language after the acquisition of the mother tongue.   However, the difference is in what between 'Foreign Language Acquisition' and 'Second Language Acquisition', should be considered to be what the status of this language in the community.

For example, for people of non-English language background who learn English in an English speaking country such as United States, United Kingdom or Australia, the definition of English as a second language is used to describe their learning language. In turn, some foreign language learning takes place in settings where the language plays no major role in the community and is primarily learnt in the classroom. For example, English as a foreign language is learnt in France or Japan.

Another distinction is made between 'acquisition' and 'learning', Krashen (1988) defines for the learner how to process his/her language learning. The term 'acquisition' refers to a subconscious process of 'picking up' a language through exposure and the term 'learning' refers to the conscious process of studying it. According to this view, it is possible to distinct 'acquisition' and 'learning'. On the other hand, it is problematic for teachers to assess whether the learner involves to be or not to be conscious in learning language (Ellis, 2008).

In the present research, the young NCS children were taught Chinese as a second language in the local preschools.

2.3   Second Language Acquire (SLA) in Early Childhood

Most study to date has targeted immigrant bilingual children who have been observed by teachers, parents and researchers in the English speaking countries. In the following, Tabors (1997) described the process of early second language development, based on observing minority children in preschools in the United States. Young children during the first few months in the new country simply continue to use their home language and then go through a non-verbal period or 'silent period' when they just listen actively but do not seem to talk much. Next, they will begin to use some formulaic language ('telegrapic period') and

finally, they begin to produce language creatively. Winitz et al., (1995) studied a Polish child from 7-year-old to 14 years-old in his English language development. They documented the shift from the first period to the second, showing the child to take six months in the silent period until he begun to use two - or three- word sentences with his peers. He was rated as having native speech performance by age 14 years old. The conclusion was that the Polish child's silent period experience contributed significantly to his development of English speech patterns. It indicates that children who start a new language when their first language is well-established and when they have already experienced school demands in another language, come to language learning with many advantages (Pinter, 2011). The children can transfer learning strategies from L1 to L2.

The following study is experimental treatments on two Asian children. Kim (2008) aimed to find out how to effectively support beginning-level English as a second language (ESL) to develop children's academic English. The two participants were five to six years old from China or Korea. They did not attend preschool before they came to United States. After they spent a year in their new L2 environment, they did not automatically develop a wide range of linguistic skills. The researcher designed two sets of treatments: a set of instructional sessions based on oral-written integrated input and another set based on just oral language input. The study period lasted for 10weeks. The oral measures were taken with formal assessment tool before and after the treatments. A picture description task was used for informal assessment to measure treatment effects. The primary objective was to expand the students' vocabularies. Both students made progress in learning English oral language skills during the research period. However Kim reported the oral-written integrated input method was identified to produce greater gain in their oral language development than just the oral language input method for beginning ESL students who

possessed minimal oral and written language skills.

The two mentioned studies represent two kinds of immigrant bilingual children learning to process their SLA development. Although their L2 was English, the two Asian children were different from the Polish boy in learning L2. The early intervention could support the teacher to facilitate the L2 children in learning language in the class.

Most of the NCS children in the present study were born in Hong Kong. They did not learn Chinese before they joined the preschools and they did not have the opportunity to use Chinese after the preschool time (Unison, 2012). It is a crucial period for them to develop their L2 experience in the preschools when they are well established their L1. They can transfer learning strategies from L1 to L2 in the education setting. A longitudinal research project studied 27 NCS children from their transition into Primary 1(P1), with follow up into their P2 and P3 performance (Hau, 2008). He noted that those NCS children who attended a local Cantonese-speaking preschool did integrate more easily to the local Cantonese-speaking primary school. However, this survey failed to answer what kind of preschool experience these NCS children had. Moreover, this survey indicated that the NCS primary school children could achieve a high score on the English subject yet they still had less proficiency to learn Chinese. He reported that the Chinese subject became a challenge for them.

2.4   Past Studies on the Learning of Chinese Among Senior School NCS Students in Hong Kong

It is a well-accepted notion among sociolinguists that language is not just an instrument of communication; it is also a symbol of social or group identity (Grosjean, 1982). The past two studies (Shum et al., 2011; Lai et al., 2015) surveyed the Chinese language learning among NCS secondary school students who studied in the 'designated schools' in Hong Kong.

The introduction mentioned that 'designated schools' commonly take the NCS students and used English as the teaching medium. In turn, the 'mainstream schools' were for the students who possess a proficient level of Chinese. The two surveys indicated the NCS participating students who were born and educated in schools over 11 years in Hong Kong, were still not proficient in Chinese. Shum et al., (2011) point out they were excluded in the 'mainstream schools' or from community language practice although they were highly motivated language learners in Chinese. It means the NCS students face both problems of social integration and linguistic assimilation. For this reason, Lai et al., (2015) pointed out that they were affected by their cultural identity to have self-confidence in learning Chinese because the aim of this survey was to examine the relationships between acculturation attitudes and L2 learning. The present research was to investigate the NCS preschool children who attend the local preschools. The two surveys help the researcher to understand the attitudes of the NCS students in learning Chinese.

2.5 Past Studies on the Teaching of Characters to, and Learning among, NCS Preschool Children

Loh & Tse (2012) introduced Integrative Perceptual Approach (IPA) pedagogy and the design of learning materials to the preschools. The IPA approach is based on the book of "Integrative and effective approach to teaching Chinese characters" by 謝錫金 (2002). This book suggests teaching character recognition by using a hybrid approach through character- and meaning-centered approaches to be more effective than the traditional character teaching approach with stroke sequence. 謝錫金 (2002) points out children can master the spoken language which includes semantic and grammar in their early years. Then children can easily recognize the graphemes through the meanings and the phonemes.

謝錫金 (2002) thinks the processing of character recognition is from meaning and phoneme to grapheme through children's lexical development. Lexical development means that 'when Chinese children acquire of words, they divide the words into the understanding of word meanings and the use of words.'(ibid). Loh & Tse (2012) pointed out non-Chinese speaking children did not have opportunities to learn Chinese except in their preschools. Consider their family members and communities; they would not use Chinese in their daily lives after preschools. They justify the IPA pedagogy and the teaching materials with second language learning theory for the target Chinese teachers to teach non-Chinese speaking children. They investigated three school-based curriculum of character learning in non-Chinese speaking preschools. The participants were three principals, six teachers and 60 NCS children in lower form (4 to 5 years old) and upper form (5 to 6 years old) respectively. The participant children were taught by the teachers through IPA pedagogy and the design of learning materials which incorporated character clusters, nursery rhymes and structure of characters. They pointed out generally young children learn language through repetition with the nursery rhymes. NCS children could not have their Chinese language environment after preschools and that caused them to have difficulties to remember what they were taught. The nursery rhymes could provide contextual vocabularies that they believed could promote NCS children learning of characters. The data collected include quasi-experimental method, classroom study and focus group in the first year study. The researcher measured how much characters the NCS children learnt with quasi-experimental method. The classroom study included analysis of the lessons effectiveness and assessment. The focus group included principals meeting, teachers meeting and parents meeting. It purposed to collect the responses through different stakeholders. After the "IPA" curriculum was implemented in one year, this resulted in their design curriculum being

effective to promote the NCS children learning characters and their learning motivation.

The principal investigator of the previous research, Loh et al. (2013) reported another study on the effectiveness of the same IPA curriculum in one non-Chinese speaking preschool. The participants were a total of 35 NCS children from lower and upper form classes and two teachers. The data collected was on measurement of how much NCS children learnt through the curriculum. The study stated that it was the first study in Hong Kong to investigate the design curriculum for NCS children. The purpose of the design curriculum for NCS children improved their speaking and listening with Chinese nursery rhymes. They believed the nursery rhymes could promote NCS children learning Cantonese. The nursery rhymes had musical rhythm that would motive NCS children learning Chinese. They also believe NCS children enjoy music and dance. The study addressed the nursery rhymes in the learning materials so that it could help NCS children to memories what vocabularies they were taught. The test was held at the beginning of the term, the mid-term and the end of the term in a year. The researcher was focused on measuring NCS children in character recognition, oral skills and character writing. The figures indicated the NCS children to have progressed on their Chinese language learning especially the NCS children's Chinese listening and speaking ability, and the ability to recognize characters. In addition, the NCS children were able to write some characters to express themselves independently (Loh et al., 2013).

The above two studies focus on the effectiveness of the IPA curriculum in the non-Chinese speaking preschools. The findings can contribute to teaching NCS children characters through certain teaching approaches in school-based curriculum. In fact, the local preschool teachers meet difficulties in trying to teach character for the NCS children in the native Chinese speaking preschools. Tse (Tse et al., 2013) conducted a survey to illustrate how

many teachers encounter a lot of difficulties when teaching NCS children in the local preschools. Over half of the teachers, 67.4%, said NCS children were not fluent in speaking and listening Cantonese. It caused NCS children to have less capability in studying Chinese literacy with the native Chinese speaking children. The two above studies cannot reveal the difficulties about teaching characters in the local preschools. As the focus of the present research investigated current teaching and learning in classroom settings. The quantitative studies do not report in depths about the teachers difficulties in teaching characters; especially they encounter what the difficulties are in teaching characters to NCS preschool children. So far, little is known about the relationship between teaching and learning in classroom settings in the past studies.

2.6   Past Studies on the Learning of Characters Among Local Preschool Children From Linguistic Perspective

Over a few past decades, the linguistic experts' interest has been to investigate how the preschool children in Hong Kong learn Chinese characters. It is because Chinese preschool children are taught to read Chinese characters without the support of a phonic transcription system (Ho & Bryant, 1997, Tse et al., 2007). The teaching approach is different with Mainland China or Taiwan where Chinese characters in textbooks are printed with the phonetic system. Furthermore, the preschool children in Hong Kong are to start earlier than the neighbouring area Chinese students to learn characters. The following table is to show Chinese preschool children were found their orthographic awareness in their cognitive development (Chan & Louie, 1992; Chan 1996; Ho & Bryant 1997; Ho & Au, 2003; Chan & Nunes, 1998, 2001; Ho et al., 2003). Orthographic awareness is early development of orthographic skills when the children need to be aware of the strokes, components and the

whole characters.   The following table shows the past studies to find orthographic awareness

development in the Chinese preschool children according to their age.   Chan (1996) points

out that the age range of 4 to 5 year old still has limited experience of character handwriting

in the preschools so Table 3 does not show related studies at this age group.

Table 3: Past Studies on Chinese Preschool Children Having Orthographic Awareness at

Different Ages in Hong Kong

	3 to 4 years old	5 to 6 years old
Stroke	Notice that their own names are formed by a few strokes (Chan & Louie, 1992).	
	Show that their visual perception and spatial organizational abilities for copying Chinese characters (Chan, 1993)	
Component		Able to use stroke patterns as a perceptual unit (Chan,1996).
		Able to pay attention to the phonological radical which provides phonological information at an intra-character level (Ho & Bryant, 1997).
		Able to understand that most characters consisted of two components (Ho et al., 2003).
Whole character		Able to understand one to one correspondence between a syllable and a character (Chan,1990)
		Correct writing their own names which related to their utterance of their name (Chan & Louie, 1992).

Now the studies will be mentioned in Table 3 which were related to the development of Chinese native speaking preschool children in Hong Kong, in terms of their orthographic awareness of Chinese characters.

First, two studies revealed that by the age of 3 to 4, preschool children were aware of strokes in relation to Chinese characters.

Chan and Louie (1992) studied 60 preschool children aged 2 to 6 with the experimental research approach, in order to understand the function of print and concept about writing. The findings revealed that the 3-year-old group could differentiate picture drawings from Chinese character writing. Also, they have the perceptual skills to differentiate different strokes in the characters (ibid). The second study by Chan (1993) was on the readiness of preschool children in learning to write Chinese characters. Chan studied 15 boys and girls respectively who were 3-and 4- year-old in two preschools. Three instruments were used to measure their visual perception and spatial organization abilities. The children were assigned three tasks namely copying simple graphemes, and copying familiar and unfamiliar Chinese characters. Results showed that they could use their visual perception and spatial organizational abilities for copying in all three tasks. It suggested that the young children had developed the concept of space, writing reproduction ability and writing adaptation skills by the age of 3. The two studies indicated that local preschool children as young as three years old showed readiness in writing Chinese characters.

By the age of five to six years old, three studies investigated the orthographic awareness of Chinese components. The first study studied 100 children from the age of 5 to 9 (Chan, 1996). The aim was to examine whether children use components as units of visual analysis in word recognition. Children were asked to discriminate pairs of Chinese pseudo characters that varied in the number of strokes and the number of components. If strokes

were the units of visual processing, then children would make more mistakes in the pairs of characters with more strokes. On the other hand, if components were the units of visual analysis, then characters with more components should be more difficult to discriminate than characters with fewer components. The study found that children in the five to nine age group could use the components for visual analysis to differentiate the characters correctly and no age effects were found. In other words, children aged five can be as fast as the nine-year-olds in visually differentiating the pair of characters. It also showed that the five-year old children have perceptual skills to focus on the components.

The second study by Ho & Bryant (1997) was a 4-year longitudinal study aimed to examine the relationship between Chinese children's phonological skills and their success in reading. One hundred native Chinese speaking children were tested on visual and phonological skills at the age of 3, before they could read. The findings showed that pre-reading phonological skills significantly predicted children's reading performance in characters two and three years later. The researchers highlighted that the main reason for this relationship was that phonological knowledge helped children to make use of the phonetic components in characters. Chinese children at the age of three initially learnt to read whole characters using purely their visual skills, and when they reached around 5 years old they also paid attention to the phonetic components in the characters. The second study produced results consistent with that of the first study, showing that five-year-old children utilized their perpetual skills to recognise the components in the characters. The third study by Ho et al., (2003) investigated a totally 60 native Cantonese speaking children aged five to eight years in preschools or schools in Hong Kong. The aim of the study was to investigate the developmental pattern of Chinese children's orthographic knowledge. Three groups of children were investigated: 5 to 6 year olds in one local preschool, the 6 to 7 year olds in

grade 1 and 8 to 9 year olds in grade 3 from a native Chinese primary school. Twenty children were in each group.   The participants were tested individually in Chinese characters reading tasks, Chinese characters spelling tasks and four orthographic-related tasks in groups. The study illustrated that young children aged five to six had acquired structural knowledge and they understood that most characters were consisted of two components.   They concluded that all the preschool participants had 'character configuration knowledge' as the foundational stage of orthographic knowledge development in characters (Figure 1 "A Model of Orthographic Knowledge Development in Chinese").   The children would then, in five more stages, reach the stage of 'Complete Orthographic Knowledge' during the six years in the primary schools.   The Figure 1 was shown on the following page.

Figure 1   A Model of Orthographic Knowledge Development in Chinese
Ho et al., (2003)


```
┌─────────────────────────┐
│  Character Configuration │
│        Knowledge         │
└─────────────────────────┘
              │
              ▼
┌─────────────────────────┐
│   Structural Knowledge   │
└─────────────────────────┘
        ╱           ╲
       ▼             ▼
┌──────────────┐  ┌──────────────┐
│   Radical    │  │  Positional  │
│ Information  │  │  Knowledge   │
│  Knowledge   │  │ (Semantic -> │
│ (Semantic -> │  │   Phonetic)  │
│  Phonetic)   │  │              │
└──────────────┘  └──────────────┘
       │             │
       ▼             ▼
    ┌─────────────────────┐
    │ Functional Knowledge │
    │ (Phonetic -> Semantic)│
    └─────────────────────┘
              │
              ▼
    ┌─────────────────────┐
    │  Amalgamation Stage  │
    │ (Putting different   │
    │  types of knowledge  │
    │      together)       │
    └─────────────────────┘
              │
              ▼
    ┌─────────────────────┐
    │ Complete Orthographic│
    │      Knowledge       │
    └─────────────────────┘
```
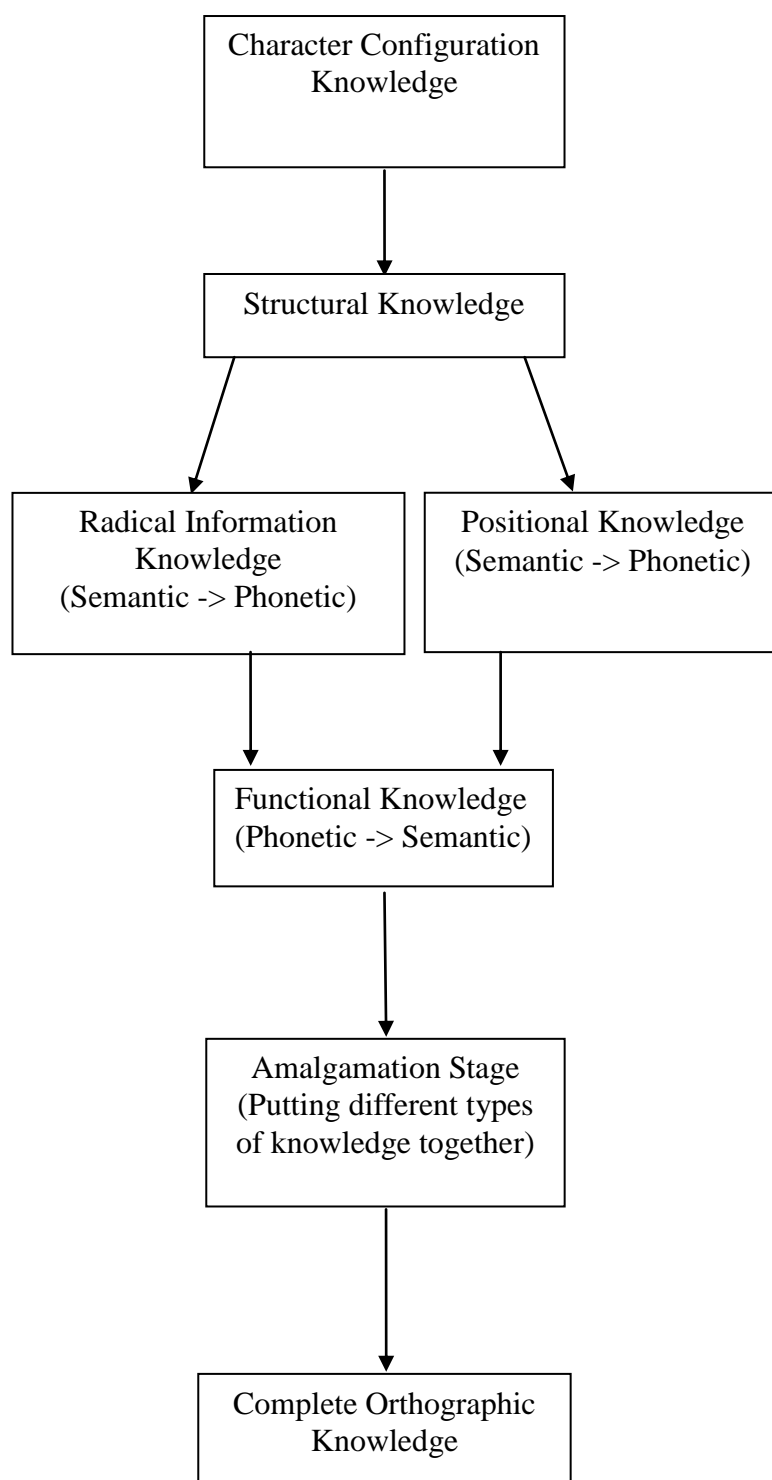
The three studies (Chan, 1996; Ho & Bryant, 1997; Ho et al., 2003) consistently suggested that Chinese children aged five to six had the perceptual skills to decompose components in characters.

There are two studies in the last column of whole character, the 5-year-old preschool children were able to use the correct number of characters to represent their names and their utterance matched the number of characters in their names.   Chan (1990) also designed a reading task to examine if preschool children utilized syllabic clues to help them to read.   Sixty preschool children, aged two to six were invited to take part in a matching task.   They were provided pictures and word cards.   The pictures were printed with familiar objects although the children might not know how to pronounce every word on the word cards.   It was predicted that children would use the syllabic clue to count the number of words printed on the cards so they were able to match the pictures.   Results from the matching tasks showed that most of the 5- 6 year olds had acquired the syllabic rule when compared to the other two younger age groups.   The study results indicated clearly that five-year-olds had already grasped the one-to-one correspondence between a syllable and a character.

The second study by Chan and Louie (1992) tested 60 preschool children aged two to six on their understanding of the functions of print and concept about writing.   The findings revealed that the 5-year-old group could use the accurate number of Chinese characters to write their own names. The two studies illustrated that Chinese children aged five or above were able to understand one to one correspondent to match one syllable of one character.

Studies summarized in Table 3 (pp.24) provided a useful reference for the educators to understand about the orthography awareness of the preschool children in learning Chinese characters.   However, these studies were based only on the results of some Chinese characters tests on the segmentation of Chinese characters, such as strokes, components or

whole characters. The studies mentioned above did not show how Chinese preschool children connected grapheme to the meaning of the characters, and therefore give us the whole picture of how preschool children learn to recognise characters. In other words, to say that one is able to recognise a Chinese character, they should have knowledge of the phoneme, grapheme and meaning of characters.

2.7 Studies on Preschool Children's Character Writing Development

The following three past studies (Chan & Louie, 1992; Chan et al., 2008; Chan 2013b) were to use two different approaches to investigate the preschool children in writing development in Hong Kong.

Chan and Louie (1992) studied 60 preschool children aged 2 to 6 with the experimental research approach, in order to understand the function of character reading and concept about writing. They examined preschool children's drawing and name writing. It was found that children make use of a four stage development scheme for writing from 2 to 6 years old:

(i) scribbles/ unidentifiable features;

(ii) linearity (use of vertical and horizontal strokes which characterize character writing) constricted size;

(iii) presence of discrete symbol units and;

(vi) correct writing including regularity of blank spaces.

Two studies were conducted by Chan et al., (2008) and Chan (2013b) with case studies through emergent literacy prospective. The term 'emergent' was introduced to describe features of early reading and writing development as distinct from those expected in learning character writing through traditional teaching approach (Chan et al., 2008).

Chan et al., (2008) investigated the integration of the traditional writing approach with a Chinese preschool child's literacy development through a longitudinal case study. The

researchers collected 30 pieces of this preschool child's drawing and handwriting within a period of 12 months during the age of the participant was between 4 years 5 months to 5 years 4 months old. The result indicated how the preschool child developed her writing system from exploring the graphic features in her handwriting to mastering the complicated characters. The result captured the preschool child's progress of her character writing development through three stages from emergent writing, approximate writing to conventional writing. Chan et al. (2008) point out that preschool children have to acquire the necessary skills, such as visual analysis skills, to segment the characters into stroke-patterns. It means preschool children have to use their perceptual skills to decompose the characters in order to understand how to use the strokes to compose the graphemes of the characters.

Then Chan (2013b) used multiple-case to study 4 children from 3 to 6 years old in two local preschools with a longitudinal approach during three preschool years. The data collected include their samples of written characters, interviewing, observation, videotaping, audiotaping and collecting documents. The participating children were provided free writing time in the class and were encouraged to write their favorite characters. The children could write freely the written characters and they explained about their writing through interview. The method was in accordance with the emerging data and the researcher collected the children's written characters during their academic year. The result indicated the preschool children to have two developmental stages from 'Character - unrecognized writing' to 'Character - recognized Writing'. In addition, the study showed the details about how the preschool children explore the character handwriting during the three preschool years. The incomplete graphemes from the children's exploring character writings were categorized to show the mistaken patterns in their written characters, such as

the problems with the strokes, the components and the spatial organizational. She concluded none of children to be able to copy grapheme of the characters exactly correct at their first time. The children developed their writing skills through incomplete graphemes to reach the exactly correct graphemes of written characters. For this reason, Chan (2013b) urged teachers and parents to tolerate children's incomplete graphemes in their written characters.

The discussions of Chan et al. (2008) and Chan (2013b) can contribute to understanding of children's character writing development in the early years. Chan et al. (2008) and Chan (2013b) concluded that children could have enjoyment in character writing without adult's interference. Thus, the three studies provide the preschool teachers as reference for teaching characters.

2.8   A Past Study on the Children's Learning to Write Characters with Stroke Sequence

The following study shows that Chinese native speaking children are able to compose characters with stroke sequence at 6 years old. The aim of the investigation was to find the common kinds of error when the children composed the characters with the stroke sequence. Law et al. (1998) pointed out that the rationale for the teaching of stroke sequence had traditionally been argued on the basis of facilitating better calligraphy and as a memory aid for the exact reproduction of the correct grapheme of the character. The study explored the importance of, and the possible educational implications for, the teaching of stroke sequences in the teaching of handwriting based on the empirical results.

Law et al. (1998) illustrates the relationship between components and stroke sequence. They point out that before characters are written, the writer often has to cognitively

decompose the characters into its constituent parts/components, in order for them to logically compose their handwriting.   Law et al., (1998) explains how stroke sequence is applied in composing compound characters.   They describe that the component (the simple character) of the compound character is logically and orderly organized by stroke sequence.   For example, the stroke sequence of the character 生 *"saang1"* (life), which is a single character, the stroke sequence of character 生 *"saang1"*(life) can be used to show the two simple characters inside the character 生 *"saang1"*(life).   An example is shown in Table 4 (pp.34): the stroke order is the left falling stroke first, then the two top horizontal lines, and finally the vertical line in the middle.   Consequently, the character of 牛*"ngau4"* (cow) is seen.   The last horizontal stroke is the character of 一*"jat1"*(one).   The character of 牛*"ngau4"* (cow) is a semantic component, which appears in characters such as 牠 *"taai"* (it), 物 *"mat6"*(thing) , 牽*"hin1"*(pull).   Through stroke sequence in composing the component of 生 *"saang1"* (life), this component can be seen to be formed by the two simple characters of 牛*"ngau4"* (cow) and 一*"jat1"*(one).   It shows the correct stroke sequence in writing the component first then the character

Table 4 The Stroke Sequence of Character 生*"saang1"* (live)

The character	The traditional stroke sequence
生 *"saang1"* (life) Five strokes sequence	ノ　　一　　牛　　生 Step 1　　Step2　　Step3　　Step 4 The forth stroke sequence in the step 3 is the single character of 牛 *"ngau4"* (cow). The character of 生*"saang1"* (live) is constitute by the character of 牛 and the bottom horizontal stroke is the character of 一 *"jat1"*(one).

Law et al. (1998) proposed that when using the correct stroke sequence in writing compound characters, the writer often was required to decompose the character into its constituent components with his/her cognitive skill. The example explained above suggests that stroke sequence can be used for teaching orthographic knowledge.

In fact, they studied 72 children and the mean of age of the children was 6 years old and 4 months. The examination was conducted at the beginning of their first years of schooling, in Grade one of a local primary school. The study reported that most children attended two or more years of preschool education so they generally began to learn to write from the age of four and had mastered the rudiments of handwriting and knew more than a hundred of the common Chinese characters. Before the children attended the writing test, they were asked whether they had always followed the same stroke order in writing the characters. Then the writing test that involved decomposition of characters was administered so that the children could show the components which were inside the characters. The study concluded that when young children learned to write characters through a stroke sequence, they had indeed developed the ability to decompose components in characters. However, Law and his colleagues were unable to explain how the children in their first years of schooling had acquired the ability to perceive components in characters. The children could not state why they wrote characters in particular stroke sequences. They only suggested that they were taught by somebody, who could be their primary school teachers, their preschool teachers or their parents. For this reason, it was still unknown as to how young children developed perceptual skills to focus on the components. The study is useful as it shows the 6 years old children are able to use sequencing of strokes and to decompose the characters into the components, serving as a reference for the present study.

2.9   Chinese Characters Teaching Approaches in Mainland China

Schools in Mainland China implement the 'phonic' system which is called Pinyin to be used for indicating the phoneme of characters.   The symbols of Pinyin are based from the Ministry of Education (MOE,PRC, 2001).   Besides the Pinyin system, there are various ways of teaching characters recognition strategies through reading characters which are implemented in schools, these strategies are reported to help students to recognize a large amount of characters in the short period (斯霞, 1978; 張志公, 1991; 張田若, 1991; 劉曼華,1993).   Those teaching approaches are based on the dichotomy between the character- and the meaning-centered approaches (Lam, 2011).   The character-centered approach means students learn the characters intensively before reading and writing and the meaning-centered approach is when the characters are introduced to students through meaning reading and writing.   Some of the teaching approaches from the two strands are illustrated in the following.

For character-centered approaches, one of the teaching approaches was for teachers to adopt classical texts, poetry or other materials.   The students were taught a large number of characters without knowing meaning.   The classical text approach had been used widely all over China for more than a thousand years (張志公, 1991).   This way of teaching had been recognized as effective because thousands of the grapheme of characters can be read aloud in a short time.   Another teaching strategy was, when teachers intensively taught a group of characters which were formed by similar components which represent with semantic or phonetic meaning, such as 馬 *"maa5"* (horse), which was also seen in the other characters like 媽 *"maa1"* (mother), 駕 *"gaa3"* (drive) and 碼 "maa5" (yard measurement).   The students were reported to have completely mastered 2500 characters by two years (張田

若,1991; 劉曼華,1993). The above approaches aimed to speed up Chinese character recognition through reading.

The meaning-centered approaches involved students learning Chinese characters and their meaning by reading them in a text. Undoubtedly the common aim of various teaching strategies of this approach was to help students to associate reading and writing skills with the use of concrete contexts. One of the approaches from the extensive learning of the characters was to stress the use of the characters. For example, the students were asked by the teachers to write a diary to record activities in the class, to recognize the characters to be seen on the road and so on. It provided opportunities for the students learning how the characters could be used in the daily context of life. The students were reported to recognize around two thousands characters after they were taught them for two years (斯霞, 1978). Another teaching approach is similar to using Pinyin systems which is Listening for learning the characters. The students or preschool children listened either to their teachers reading aloud the texts or the texts in audiotapes for twenty minutes every day until they became familiar with the texts. Then they were given the texts in print and the students or preschool children could try to connect the characters to the phonemes in their memory (谷錦屏, 1994, 2000).

However the teachers found young students in the elementary class were not benefited by these strategies. For this reason, young students were introduced to read unknown characters with Pinyin (注音識字, 提前讀寫)〔using pinyin to enable early reading〕. (關之英, 2002; Lam, 2006). It purposed to overcome the obstacle to acquire numerous characters, young students were allowed to read unknown characters annotated with their pronunciations in a text such that extensive reading could possibly start earlier. The idea of the approach of

the unknown characters with Pinyin is consistence with the result of investigation by Shu et al., (2003). They investigated the properties of the 2570 characters being explicitly taught in the curriculum of elementary schools in Mainland China. Shu et al., (2003) concluded characters that were introduced in the 1st or 2nd grade typically contain fewer strokes in relation to visual complexity.

Those approaches give examples of relevant characters to be decomposed into components or recognized in words or sentences in meaningful approaches. Though they reported the effectiveness of learning character recognition, those teaching approaches lack researches to track their records. Only articles providing views and opinions can be found.

2.10   A Study on the Children's Conceptions of Learning

The definition of phenomenography is a research method for mapping the qualitatively different ways in which people experience, conceptualize, perceive and understand various aspect of, phenomena in, the world around them (Marton, 1986). This research often depicts how people understand, distinguish, recognize, imagine, conceive or experience different aspects (characteristics) of the world around them, which can clearly be articulated in one word: "Conception" (Marton & Pong, 2005). The researchers adopt a second-order perspective which focuses on how the phenomena are perceived by people to describe what the phenomena are. The early development of phenomenography was to investigate the act of learning, and focused on studying learners conceptions of what learning actually is (Pang, 2003).

Pramling (1983) focused on children's conception of learning and desired to understand the children's view on 'Learning'. The study investigated the development of the preschool children's conception of learning in Sweden. It purposed to account for these conceptions

which could be found at different levels of development from 3 to 8 years old children.   The data was collected through individual interviews and observations from 300 children.   The study found the preschool children's conceptions of learning could be described in terms of 'what' is learned and 'how' it is learned.   The findings identified three qualitatively differing conceptions which were 'To Do' 'To Know' and 'To Understand' among the 3 to 8-year-old children.   The following three figures (Figure 2, 3 and 4) show from simplified relation the two aspects to combinations are the categories.

Figure 2

The Simplified Relation Between the 'What' and 'How' Aspects of Learning (Pramling, 1983)
Preschool Children's Learning Conception
<u>What</u>   <u>How</u> To Do   By Doing (how to learn 'To Do') To Know   By Perceiving (how to learn 'To Know') To Understand   By Thinking (how to learn 'To Understand')

Figure 3   The Structure of the System of the One of the Categories (Pramling, 1983)
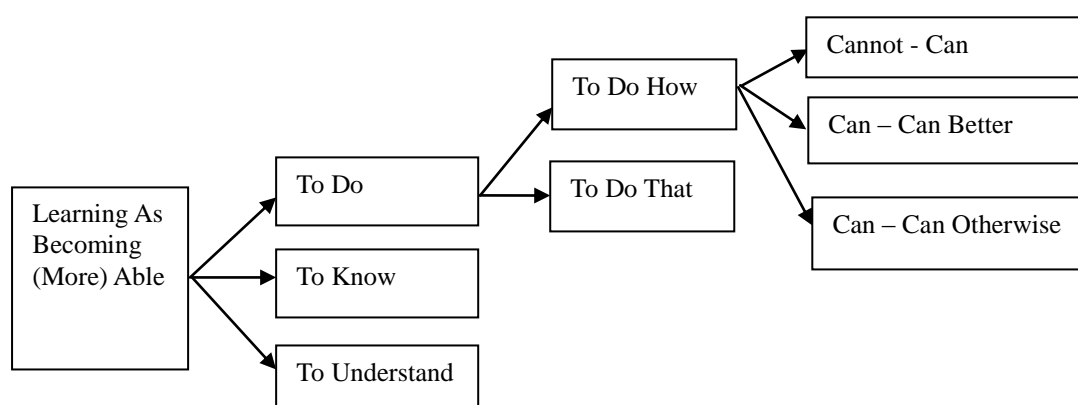
Figure 4 Depicting the Children's Conceptions of the 'How' Aspect of Learning (Pramling, 1983)
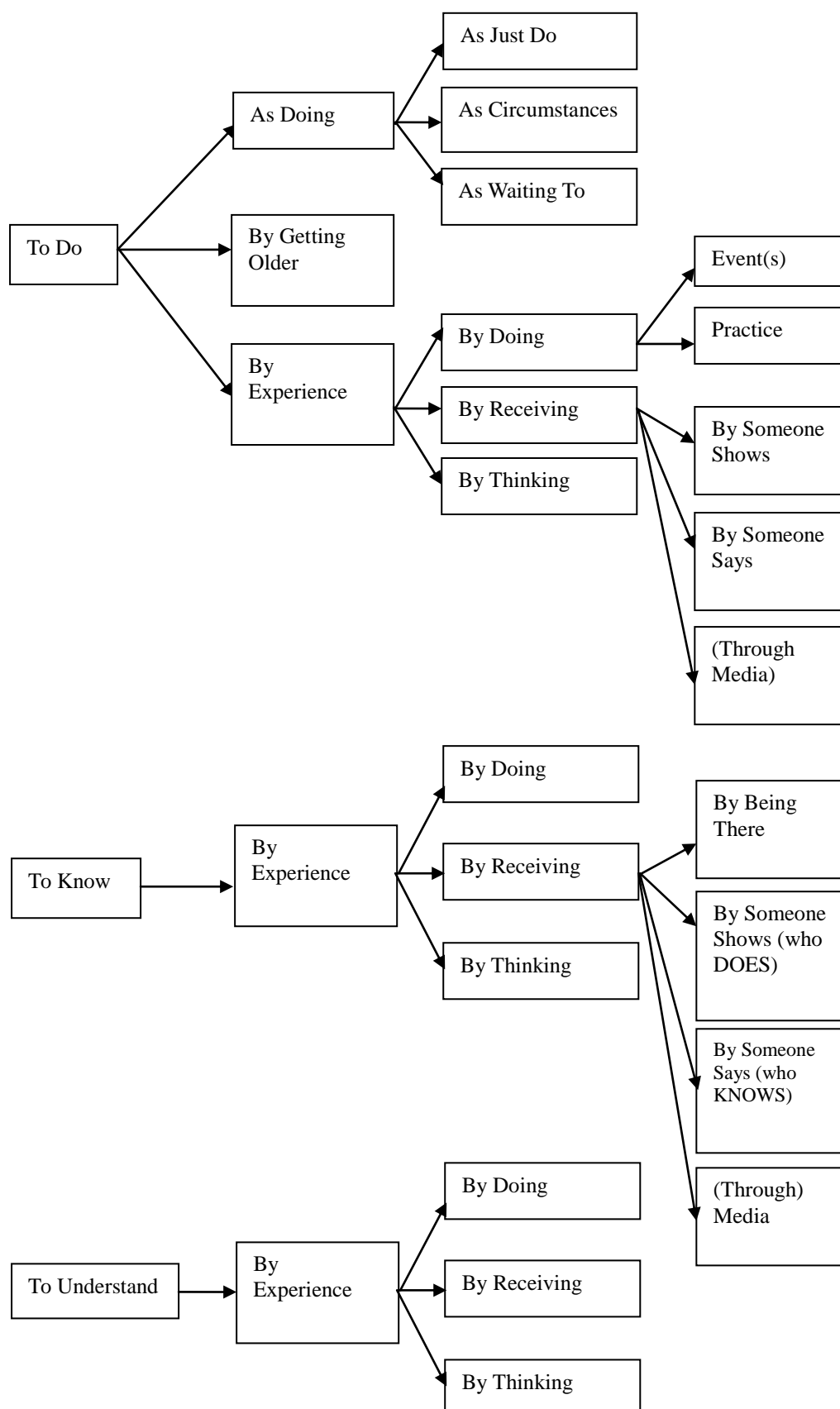
Pramling (1983) points out the lowest level of this conception is 'Doing' to be found in the age between 3 to 4 years old. By the age of five years, the idea of learning by 'Experience' has the similar notion as adult thinking. Furthermore, learning 'By Experience' may refer to learning 'By Perceiving' or 'By Thinking' in the 'mature' conception of how to learn. Pramling (1983) states preschool children's conceptions of learning are totally dominated by the notion of action. The lowest level of conceptions of learning is to do something. The middle level of conceptions of learning is to know something and the highest level of conceptions of learning is to be able to understand (as same as the adult). Piaget (as cited in Pramling 1983) describes the development of the children's thinking from concrete doing towards abstract symbolization. Furthermore, Piaget describes development as a process progressing from seeing things in an absolute way toward relativity and from a perceptual view toward logical deduction, from focusing on one variable toward focusing on many; and from focusing on results toward focusing on process.

Pramling (1983) concluded that the children learnt better as their awareness of what they had learnt and how they had learnt it increased. In addition, Pramling Samuelsson et al., (2000) suggested the importance of studying children's conceptions, in order to change teachers' conceptions, and improve the effectiveness of the teaching and learning. For this reason, phenomenography can fit entirely with the objectives of the present research.

2.11 Research on the Teaching and Learning of Chinese Characters in Hong Kong Preschools Using Phenomenographic Approach

Phenomenographic research studies conducted in teaching and learning were widely used in the primary and secondary schools in Hong Kong (Pang & Marton, 2003; Marton & Tsui, 2004; Marton & Pang, 2007; Lo, 2012). Phenomenography was developed from a primary

emphasis on questions concerning how different ways of experiencing something can be captured methodologically to theoretical questions about the nature of the differences (Pang, 2003). The recent development in phenomenography is to study the relationship between teachers' and students' conceptions. Prosser et al. (1994) found that university science teachers held a range of conceptions of learning and teaching, and that there was a close relationship between the two sets of conceptions. Teachers who use the student-focused approach are primarily concerned with their student's learning (Trigwell & Prosser, 1996). Though the description of the situation or phenomenon as it appears to the students who experience it, the study can reveal how the student's awareness may be structured (Matron & Booth, 1997). These results are consistent with the suggestion by Samuelsson et al., (2000). The importance of studying student's conceptions is related to change teachers' conceptions, and improve the effectiveness of the teaching and learning.

Lam (2012; 2014; 2016) conducted three qualitative studies on the learning and teaching of characters in local preschools with a phenomenographic approach. They demonstrate the importance and impact of the findings in phenomenographic research, that is, the conceptions of a phenomenon. His two studies (2012; 2016) illustrated the conceptual level of how to teach children to recognize characters in the local preschools. These studies are reviewed in the following.

Lam (2012; 2016) studied the Chinese preschool children and 80 preschool teachers during their Chinese literacy activities in an authentic classroom setting during four years of his supervision visits for the in-service teacher's training courses. The data was collected through the teaching plans, classroom observations, video-taped, field notes and interview with the teachers. The two studies described the instructional activities in detail and how the Chinese teachers taught and how the Chinese preschool children engaged in these

teaching character recognition activities in different preschools. The investigation found that what the Chinese preschool children learnt was not always cohesive with what was proposed in the teaching plans.

Lam (2012) characterized nine kinds of object of learning of the character teaching activities in the preschools. The analysis of the children's experience was based on their four skills which were their listening, speaking, recognition and writing skills. It means preschool children used the four skills to participate into the character recognition activities. The following Figure 5 shows the relationships between the children's four skills and the character recognition activities.

Figure 5
The relationships among the four aspects of learning
(listening, speaking, recognition and writing)
and the three elements (grapheme, phoneme and the meaning)
of characters in character recognition
(Lam, 2012)
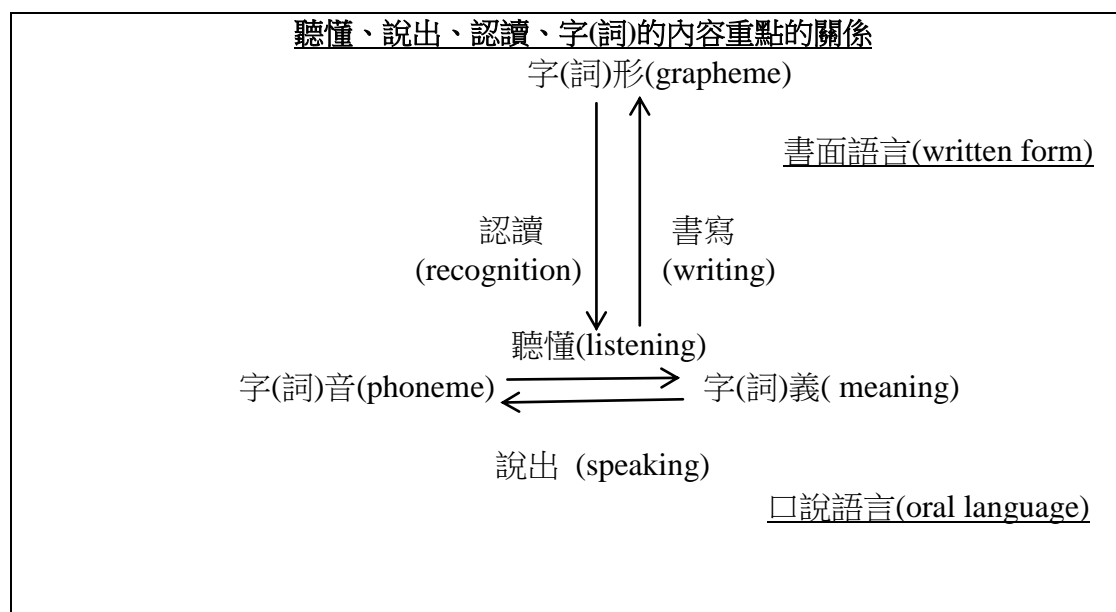
Lam (2012) indicated nine kinds of object of learning to be found in the character recognition activities. The term of 'object of learning' is to be used in phenomenography to indicate the teaching activities directed the attention of the learners (Lam, 2016). The nine kinds of

object of learning are shown in the following:

(1) children followed the teacher's verbal instructions and were able to get an object (such as the toys) , it shows the children understand the phoneme and to associate it to the meaning;

(2) children wanted an object and were taught to speak the name of the object, it shows the children understand the meaning to associate it to the phoneme;

(3) children saw the grapheme of the character card and were taught to speak the phoneme, it shows the children learn to recognize the grapheme and can associate it to the phoneme;

(4) children saw the picture and were taught to write the written characters to associate to the meaning of the picture, it shows the children understand the meaning to associate it to the grapheme;

(5) children saw the graphemes and spoke the syllable according the numbers of the words, it shows the children understand the one to one correspondence to match one syllable of one character.

(6) children saw the two character cards which looked close to the grapheme and the children were taught how to define the differences of the graphemes from the characters.

(7) children saw the two character cards and were taught to speak the same phoneme, it shows the children learn to recognize the graphemes to associate to the homophones;

(8) children saw the two characters in one character card and were taught to recognize each meaning of the two characters, it shows the children learn how to recognize the grapheme to associate it to the morpheme.

(9) children read the character card and were taught the meaning through the oral language to associate it to the phoneme of the character, it shows the children learn how to define the difference between the oral and the written language.

In conclusion, the first two kinds of objects of learning are related to the phoneme and the meaning without using the graphemes.   The rest of the seven kinds of objects of learning are related to the graphemes in the teaching character recognition activities.   However Lam (2012) found that teachers sometimes focused on teaching activities about how to make fun with children.   Although the teacher purposed the children to learn character recognition through matching card games, the teacher used the same colour cards for matching the pair of words (word means it consist of two or more characters in Chinese).   The teacher expected the children to revise the morpheme of the characters, for instance, the two characters of ocean were in blue, the two characters of forest were in brown or the two characters of sky were in white. However the children could get hints from the same colour cards to match the pair of word without regard the characters.   In this case, the teaching character activities were misrepresented.   For this reason, even the children who participated in the teaching activities; they could not learn what proposed was in the teaching plans.

The study (Lam, 2016) reproduced the findings of his published study in (Lam, 2012), he focused on the relationship between the children's experience and the character recognition activities.   Three 'Categories of descriptions' were identified in the study.   The term of 'Categories of descriptions' is the result or finding in phenomenography.   It refers to conceptions of the teaching character recognition activities by the teachers.   The three categories of description of teaching activities, each reflected a unique way of seeing by what the teachers' conceptions in designing these activities , The three 'Categories of description are namely,

(A) recognition as matching items;

(B) recognition as imitating behaviors, and

(C) recognition as constructing meanings.

Lam (2016) points out the three categories of the activities were enacted in the classrooms. The descriptions were based on how the children acquired their character recognition experiences from these activities to be described as the categories. He illustrated the teaching episodes in Categories A and B where the children were helped with clues to read out a character in these teaching activities. He doubted whether the children could recognize the characters independently. Categories C required the children to work out the sound or meaning of a character exclusively from the written forms. There was no clue that the children could turn to other than the recognition of the characters.

Lam's researches (2012; 2016) indicated the nine kinds of objects of learning and three conceptions of the teaching character recognition activities which were to relate to how the teachers enact the character teaching activities in the preschools. In relation to the present research, it is the second part of the methodology namely the 'Enacted object of learning'.

The following study by Lam (2014) was to investigate how the preschool teachers teach children to write characters in the classrooms and how the children learn to write the characters as a result of the teaching of the teachers. The study (Lam, 2014) was conducted in two local preschools which involved three class teachers and their total of 80 K3 children (40 boys and girls respectively, aged 5.75 on average). As the Introduction mentioned K3 children are taught to write characters in most preschools. The data was collected through observation, video-tape and the result of the pre- and post-test in the study. The three teachers taught the assigned 11 characters which ranged from 5 to 15 strokes during the time when the study was conducted. The assigned 11 characters were commonly taught in the curricula of the two preschools so the teachers were told to teach in the way they normally did, with no suggestions or requirements for the study. The purpose of the study was to find out how the teaching of the same set of characters was enacted differently by the teachers.

During the period when the three teachers implemented their character teaching of the 11 characters, one of the teachers was found to fail to follow the recommended written form (stroke sequence) by the Education Bureau to teach children to write characters. In this regard the three participating teachers were not consistent in their teaching contents. The study evaluated their teaching strategies because the three teachers were not to experience the same phenomenon.

The seven teaching strategies were identified in this study so it still can contribute to the teachers as reference to teach characters on the whiteboard. Accidently the study found the gap between the practices of teachers in preschool and the recommendation written form of characters by the Education Bureau. Through the teacher interviews, one of the teachers said she did not know the existence of the recommended forms. Finally, Lam (2014) thought the study served as an example to illustrate the potential power of phenomenography to fully unfold the phenomenon of teaching in classrooms.

In conclusion, Lam's (2014) study provided explicit reference to the present study. The present study was based on the conceptual framework of the three parts in learning situations as suggested by Marton & Tsui (2004), namely the intended object of learning, the enacted object of learning and the lived object of learning. The intended object of learning was based on the participating teachers' lesson plans and the semi-structured face-to-face interviews with them. The enacted object of learning was based on the researcher to collect data when the teachers implemented their character teaching activities to the children in their classrooms. The researcher did not only focus on how the teachers taught children to write characters in the class. She also recorded how the NCS children participated in the teaching activities. The lived object of learning was to describe with the concrete samples what the NCS preschool children actually learnt from the teaching character activities.

2.12   Summary

In this chapter, previous studies were reviewed about the young children in learning second language acquisition from abroad.   It provides the light to understand how young children to develop their second language acquisition.   The current studies revealed insights about the NCS students and children learning and teaching Chinese in Hong Kong.   It shows their identities and their motivation in relation to their language learning.   There are fewer research studies of how the NCS children learning the written characters.   The past studies on the local preschool children contributed to understanding of how the young children are learning characters in the local preschools through different perspectives.   Furthermore the teaching strategies from Mainland China were reviewed.   However this research cannot respond to the existing problems in teaching characters to the NCS preschool children in the current practice classrooms.

Phenomenography has been identified as an appropriate research methodology to study the relationship between teachers' and students' conceptions.   It has been widely used in the preschools, primary & secondary schools in Hong Kong (Pang & Marton, 2003; Marton & Tsui, 2004; Marton & Pang, 2007; Lo, 2012; Lam, 2012, 2014, 2016).   Phenomenography was developed from a primary emphasis on questions concerning how different ways of experiencing something can be captured methodologically to theoretical questions about the nature of the differences (Pang, 2003).   This study aims to investigate the learning and teaching of Chinese characters to NCS preschool children in Hong Kong.   The adoption of phenomenography in the early childhood education setting enables the possibilities of new understandings in teaching Chinese for NCS preschool children.

Chapter 3: Methodology

3.1 Introduction

The previous chapter reported on past studies, as presented in the literature, of the approaches used in Hong Kong and Mainland China for teaching characters to preschool children and their learning of these.   Most past studies focused on the effectiveness of the curriculum for the NCS preschool children learning Chinese characters (Loh & Tse, 2012; Loh et al., 2013); there have been few qualitative studies of teaching of Chinese characters to NCS children in local preschools and these children's learning.   The present study aims to fill such gap.

Phenomenography was originally developed in 1979 by Professor Ference Marton and his colleagues at the University of Gothenburg to study thinking and learning (Marton, 1986). It has been widely used for many years in educational fields around the world, including Hong Kong, (Marton, 1981, 1988, 1994; Marton & Booth,1997; Bowden & Marton, 1998; Marton & Tsui, 2004; Marton et al., 2010; Lam,2012).   The purpose of a phenomenographic study is to focus on the description of things as they appear to, and are experienced by, people (Pang, 2003).   Matron & Booth (1997) point out that the view of phenomenongraphic study posits a way of experiencing something that is related to how a person's awareness is structured.   Marton et al., (1992) illustrated an example in order to explain what "A Way of Experiencing" meant.   He described their research to investigate the new physic curriculum to be implemented in the university.   The university proposed the questions of whether the new curriculum was suitable for the students.   They employed phenomenography as research framework for a qualitatively study, the participants were the physics students to be interviewed because they experienced the new curriculum. "A Way of Experiencing" represents individual's experience and "Ways of Experiencing" represents group's experience. In phenomenographic studies, terms such as 'Conceptions' 'Ways of

Understanding/Comprehending' have been used as synonyms for 'Ways of Experiencing', they should all interpreted in the experiential sense and not in the psychological, cognitivist sense (Marton & Booth, 1997). The term 'conception' means a unit of the findings to be used in phenomenographic studies (Akerlind,2005). The findings in the present research represent what Chinese preschool teachers' and NCS children's conceptions of character writing in the similar setting of the local preschools. Past research conducted by a phenomenographic approach to study learning and teaching in three Swedish preschools is outlined in the next paragraph.

Holmqvist et al., (2011) studied how three preschool teachers taught shapes, each to a group of 12 preschool children of 4 to 5 years of age in their classes in Sweden. Their methodology entailed collecting data based on the three parts of learning and teaching phenomena (situations), namely the planned, the offered and the discerned. The study showed how teachers and learners in naturalistic teaching and learning contexts approached their teaching and learning, and how these approaches related to the students' learning outcomes in those contexts (Prosser, 1994). The results were based on these three parts of phenomena. The first finding was constituted by the three teachers' intentions i.e. what they stated in their lesson plans, before the class, as the intended outcome to teach the children. The data was collected from their lesson plans, the interview and pre-test. The second finding was constituted by the teachers and the children in cooperation in the class. The data obtained from the researcher's classroom observation recorded how the teacher structured the conditions of learning for the children and the children's participation in the learning activities. The data material obtained in the study consists of videotaped activities of the children. The third finding, made through interview, post and delayed post-tests in preschools concerned the children's knowledge. The children's knowledge was related to

what the children actually learnt during the learning activities. The three parts of the findings were constituted by the participant's experiences of the teacher's intention and action and the children's discernment. The study found that the objective of the learning process and contents were not consistent with the learning experience of the preschool children. The data showed the children's focus to be different from the teachers. For example, the learning materials were used to teach size (much) and number (many). The teacher's intention was to make it possible for the children to discern the difference between size and number by sorting different items. The result showed some of the children had difficulty understanding that five meat-balls were more than four small sausages or three hot dogs. In the interview with the children, they focused on the size of the materials. The analytical data indicated the children did not have the conception of the terms of size and number. They could not separate the meaning of the size and number in relation to the materials.

It is characteristic of phenomenographic study to be descriptive of the relationship between the people and the phenomena (Akerlind,2005). Phenomenographic study in teaching and learning has been used to investigate how teachers and learners in naturalistic teaching and learning contexts approach their teaching and learning, and how these approaches relate to the students' learning outcomes in those contexts (Prosser, 1994). The present study aimed to identify variations in ways of experiencing of four Chinese teachers and their NCS children in their teaching character writing activities and to describe their different conceptions in terms of the dimensions of variation experienced by them. In other words, the researcher was to use descriptions to capture the changeable learning situations from the second order perspective – the results are based on the participants' experiences in the situation (Marton, 1981, 1988; Marton & Booth, 1997). In contrast, if the researcher

focuses on the changeable situations without recounting the experience of the participants, this is the first order perspective. Because of this, the phenomenography researcher must observe certain procedures to collect and analyze the data. The details will be shown in the section of validity and trustworthy.

The data collected were based on the three parts of learning situations or phenomena. The first part was the teachers' intentions. The second part was the teachers' actions. The third part was what the NCS children learn from the teaching activities led by the teachers. The aims of the phenomenonographic research are to depict how people understand, distinguish, recognize, conceive or experience different aspects (characteristics) of the 'world' around them (Marton, 1986). In this study, the 'world' means the character teaching activities in the local preschools. The findings of this study were to map qualitatively the different ways in which the teachers' and the NCS children's experienced the character teaching activities, such as the character writing demonstration by the teacher or the written characters by the NCS children in the local preschools. The purpose of this is to illustrate and communicate the characteristics of conceptions of the ways of experiencing the 'world / situation' or 'phenomenon' (Yates et al., 2012).

The term "qualitatively in different ways" means how these data will be categorized. However the three parts of the data are not only in categories. These categories have to be logically and hierarchically organized (Marton & Booth, 1997), to show what the different descriptions are between these categories. These different categories are logically related to each other; in this sense the result reflects how the people obtain their experience from the same object (Marton, 1994). For this reason, the categories are to be named as 'categories of description' and 'outcome space'. The two terms will be discussed in the following sections.

The findings can be used in identifying the possible ways of teaching Chinese character writing to NCS preschool children in the local preschools. In this respect, the present research is an endeavor to theorize the everyday character teaching activities and the NCS preschool children's experiences in learning character writing. The following sections present the design of the research, along with details of how the research was implemented and how the data were analyzed.

3.2 Engaging a Phenomenograhic Research Approach

Phenomengraphic researchers often use interviews and observations for data collection in order to record in detail the delivery of teaching activities and particularly the interactions between the teacher and the NCS children in the class. The video- and audio- tape were employed as the main data source of this study. Phenomenographic research is not strictly to use of certain kinds of methods to collect data, the priority is to consider how to investigate the participants' ways of experiencing in the situations (Lam, 2016). Marton & Tsui (2004) illustrated how to examine teaching and learning in three parts using this approach: the intended, the enacted and the lived objects of learning, and these concepts are used in the phenomenographic approach.

In teaching Chinese characters, the intended object of learning informs what the Chinese teachers planned to teach regarding character handwriting in the class. The enacted object of learning tells us about how the Chinese teachers implement the teaching of character handwriting in the class. The lived object of learning refers to what the NCS preschool children experienced in the teaching of character handwriting in the class. They learnt to write the characters from the whiteboard, and put their handwriting in their exercise books, which is a concrete illustration of what they discerned in their character learning experiences.

Tse et al. (2007) criticized that the conventional Chinese characters teaching approach which relies on the learner's handwritings because it is considered difficult and boring. However, children are taught to read and write characters at the same time because expressing their own meanings and understanding the meanings of others (i.e., to communicate in print) are of equal importance (Lam, 2014). The handwriting characters by the NCS children in their exercise books reflected what they learnt from their teachers after they had engaged in the teachers' character writing demonstration on the whiteboard in the class.

3.2.1   The Meaning of the Object of Learning

Phenomenographic research focuses on the relationship between the person and the phenomenon or the situation (Marton & Booth, 1997). These relationships are called objects of learning. In other words, the objects of learning refer to 'what students are learning' (Lo, 2012). In this study, the objects of learning included the experiences of the NCS children in learning characters in the preschools and the experiences of the teachers in the teaching of character handwriting on the whiteboard. The present study was based on the conceptual framework of the three parts in learning situations as suggested by Marton & Tsui (2004), namely the intended object of learning, the enacted object of learning and the lived object of learning. The intended object of learning was based on the participating teachers' lesson plans and the semi-structured face-to-face interviews with them. The enacted object of learning was based on classroom observations when the teachers implemented their teaching activities with the children in their classrooms. The lived object of learning was based on classroom observations of the performance of the NCS children in the activities after their teacher's instructions and on interviews with the NCS children. In short, the intended object of learning was related to the teachers' understanding of teaching

characters in the class. The enacted and the lived object of learning were related to the teachers' and the NCS children's actions in the class. Lam (2016) points out people's way of acting reflected their ways of seeing. He studied how the preschool teachers enact the teaching character recognition activities in the preschools with the phenomenographic research approach. In the present research, the participating teachers' and the participating NCS children's way of acting reflected their ways of seeing in these character writing activities.

3.2.2　The Meaning of Ways of Experiencing

Marton & Booth (1997) point out 'a way of experience' is twofold. The first is the way in which the phenomenon is distinguished from its context. This is sometimes called "external horizon". The latter is the way in which the phenomenon and its parts are related to one another. This is sometimes called "internal horizon". So, a way of experiencing depends on how the parts of the phenomenon are distinguished and appear at the same time in the learner's focal awareness and the parts of it move into the background.

In order to understand the ways different people are experiencing a phenomenon, a figure was presented by Marton and Booth (1997), which is named "A way of experiencing something" (see Figure 6). It contains two strands to constitute the experience for a learner. In Figure 6, structure aspect and referential aspect are to denote how the learner structure his/her awareness or understand something.

Figure 6   A Way of Experiencing Something (Marton & Booth,1997)
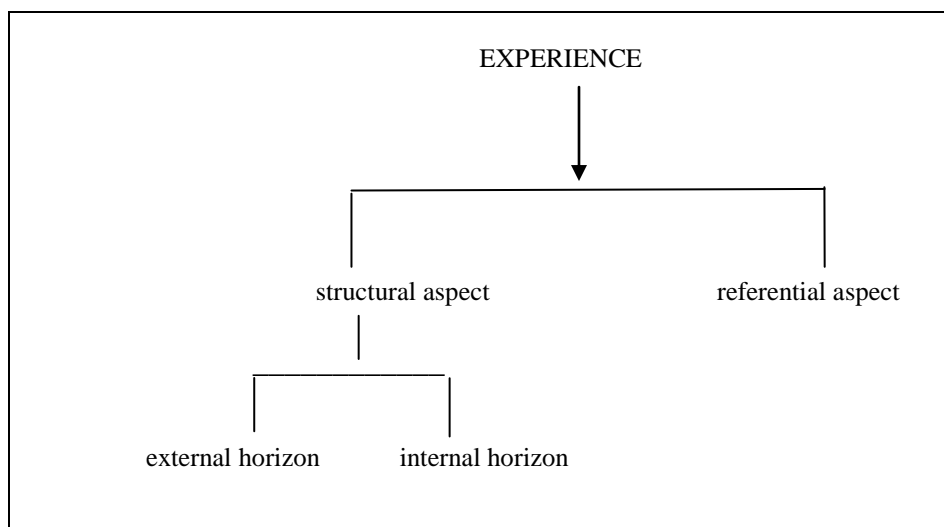
According to Figure 6, experiencing a phenomenon is a certain way of being aware of something or how people structure awareness from the phenomenon.   Applying it in the present research concerns what the NCS children discerned from these character activities, such as the character writing demonstration in class.   The way of understanding was shown in the NCS children's awareness when they learnt how to form the grapheme of characters in their exercise books.   In figure 6, the *referential aspect* refers to the final conclusion of the NCS children about what the character writing demonstration meant for them.   The *structural aspect* refers to how the NCS children perceived the meaning of the teaching activities.   Under the structural aspect, it has twofold which are the external and internal horizons.   The external horizon denotes the NCS children's discernment of the whole processing of the character writing demonstration activity; the internal horizon denotes the discernment of the NCS children's focus on the parts within the whole teaching activity (Marton & Booth, 1997).   In this way, the NCS children saw how the teacher writes the Chinese character on the whiteboard to be the *structural aspect*.   The *external horizon* was related to what appeared to be seen and heard by the NCS children.   It was the teacher's verbal instruction and the process of the character writing demonstration.   Internal horizon

was related to what part of the whole process of the teaching activities the NCS children focused on. The *structural aspect* and the *referential aspect,* are dialectically intertwined and occur simultaneously when people experience something (Marton & Booth, 1997). How did the NCS children experience their teacher's writing demonstration? The figure 6 was used to show the way NCS children understand how to form the grapheme of a character in their handwriting exercise. For this reason, the processing of the Chinese teacher character writing demonstration on the whiteboard and the NCS children processing of their character handwriting were video-taped. The categories of the data are shown in the enacted object of learning and the lived object of learning. This diagram of Figure 6, shows how the participant's awareness is structured.

3.2.3   The Meaning of Critical Features

The term "critical features" refers to the part of the learning contents in the teaching activity. If a teacher wants her/his students to gain a particular way of understanding, or to develop a particular capability, the teacher must make it possible for them to discern features that are critical for that particular learning (Marton & Tsui, 2004). In other words, critical features are what learners are supposed to see in the part of the learning content which is provided by a teacher (Marton & Pang, 2008). For the present research, the learning contents are the teaching activities for the NCS in the learning of characters in the class. For example, the teachers demonstrated how to compose the characters on the whiteboard in order to teach the children to copy their handwriting in their exercise books. The teachers provided oral instructions to teach the children how to compose the strokes to form the characters. The learning contents were presented by the teacher's gestures and their oral instructions which became the features to be discerned by the children. Any part of the learning content which

failed to be discerned by the NCS children was the critical feature in the learning content. If the teachers want the NCS children to comprehend the critical features in exactly the same way as they themselves do then the NCS children must also be able to focus on the same features that the teachers do. In other words, the critical features must be provided by the teachers and discerned by the NCS children in the teaching activities.

3.2.4 The Meaning of Pool of Meanings

It is the procedure in the data analysis of phenomenongraphic approach. The data were found from the individuals then those individuals were grouped by commonalities and differences. These select data made up in different pools in order to group the data. When the researcher focused to the pools of data, the meaning could be found from these group data.

3.2.5 The Meaning of Categories of Descriptions

A description is associated to describe a way of experiencing that might apply in some sense across a group (Marton & Booth, 1997). The aim of a phenomenongraphic approach is to reveal the variation, captured in qualitatively distinct categories, of ways of experiencing the phenomenon in the research. Categories of descriptions as the research outcomes refer to the qualitatively different ways in which people are aware of the ways in which they experience various phenomena and situations around them (Marton & Pang 2008). The research outcomes of the phenomenongraphy are used with the term of 'conceptions'. This refers to whole qualities of human-world relations which are the qualitatively different ways in which some phenomenon or some aspect of reality is understood (Johansson et al., 1985). The phenomena in this study were constituted by three research questions which were related

to the intended, the enacted and the lived object of learning. The situation was about the activities of learning and teaching of characters. In the present research, these qualitatively different ways are found in the relationships between the phenomena or situation and the participants. This means what the participants' experiences were from these teaching activities in the process of the phenomena. For example, each of the NCS participating children was incorporated into these teaching activities so that his/her experience contributed to become a part of the categories. When the researcher collected data from interviews with the NCS participating children, another complementary tool was their character handwriting which was used to enable the NCS children to express themselves. The categories of the experience from the participating NCS children were attached to the descriptions in order to show what their experiences in these categories.

Marton (as cites in Pramling, 1996) points out knowledge is both personal and collective, partly experienced by the individual and partly beyond the individual, as the subject and the object are internally related in the phenomenon. The collected data were segmented into the categories in order to map the qualitatively different experiences of the teachers' or the NCS children's within the phonomenon. These categories were attached to the descriptions to explain the characteristics of the categories. That is why these categories are named 'categories of descriptions'. In addition, these explanations in the categories are logically and hierarchically organized (Marton & Booth, 1997).

3.2.6 The Meaning of Outcome Space

The outcome space refers to the categories of description which come up with structural relationships between different categories. It means the connection between the categories to be used to describe the participant's conceptions. It denotes the various ways the

participants had of experiencing the same phenomenon (Yates et al., 2012). The outcome space is the final outcome of the phemonenography study and is presented by a chart. Marton and Booth (1997) suggest three criteria for evaluating the quality of the outcome spaces:

(a) individual categories of outcome space should reflect something unique or distinctive about the way of experiencing the feature of the phenomena;

(b) the categories should be logically linked and have a relationship that is frequently hierarchical and

(c) the outcome space should be represented by as few categories as possible.

3.3   The Research Method and Design

3.3.1   Site

All preschools in Hong Kong are privately run and they can be categorized into two: non-profit-making (NPM) preschools and the private independent (PI) preschools. All preschool children who are born in Hong Kong can enroll in a NPM preschool, regardless of their ethnicities. The four participating teachers were based in three NPM Chinese preschools. The children study in 3-hour sessions in the preschools which use Cantonese (a written dialect in Chinese) as the medium of instruction. The school these teachers taught in is the most common type of preschools in Hong Kong and they prepare children for attending local Chinese primary schools afterwards. The researcher obtained the information of the NPM preschools through the preschool profiles from the 'Committee on Home-School Co-operation' website (EdB, 2013). The researcher contacted the preschools randomly to find out from their principals whether there were any NCS children studying in the upper level in their preschools (reasons for choosing upper level students only will be

discussed in the next section).   Finally three preschool principals agreed to participate in the present research.   Two of the participating preschools each had one upper level class.   The third school had two upper level classes, one in the morning and on in the afternoon.

All three participating preschools employed a thematic approach in their curriculum planning. The themes covered during the data collection period included: Animal, Winter, Christmas, Chinese New Year, Clothing, Money, Community, Food and Water.   The characters chosen for their handwriting exercises were related to the themes.   Each theme was usually run for three weeks.   The children were taught to write words (two or more characters) in the first semester of the academic year from September to December; then they were introduced to write a small number of sentences after the second semester.   Their handwriting exercises were usually one-page long, with printed square frames.   The children wrote the characters four or five times then they would complete the rest of the eight or ten times at home.   The three preschools required the children to write characters three or four times a week. Besides using the handwriting exercises to teach character recognition, the children were also offered textbooks and character recognition cards that were related to the thematic curriculum.

3.3.2   Participants

The participants were 12 NCS preschool children who were attending upper level (ranging from 5 to 6 years old) and their four Chinese teachers. Only upper level preschool children were selected because they had already gained one year of experience in writing Chinese characters since they were in lower level (Chan, 1996).   The NCS preschool children in the present study live in Hong Kong and come from non-native Chinese speaking family backgrounds, including that of Indian, Pakistani, Indonesian, Nepalese and Thai.   Each

upper level class in the three preschools had at least one NCS preschool child in a class, and some had more. The class size ranged from eighteen to twenty four children. The preschool required qualified teacher to children ratio is 1:15. The first target preschool had a total of eight NCS children. The morning class had one Nepalese child, and the afternoon class had seven NCS children including five Nepalese, one Pakistani and one Indonesian. The second target preschool had two Pakistanis children in the morning session. The third target preschool had two NCS children who were one Indian and one Thai in the morning session. Therefore, all participants in the present research were twelve NCS preschool children, together with their four Chinese teachers in three preschools. The consent letters were sent through the preschools before the formal data collection procedure were carried out.

Consent letters were prepared for all three types of participants namely the principals of the target preschools, the Chinese teachers and the parents of the NCS children, and samples of the consent letters can be found in Appendix I. Some of the parents of the NCS children could not read English. The preschool teachers helped the researcher solve the problem; One of the methods was to contact the family members of the NCS children who could speak Cantonese, such as their elder sisters or brothers studying in primary or secondary school. The preschool teachers invited their sisters and brothers to tell their parents about the consent letters. Another solution was that in one of the participating preschools, one teacher assistant who speak the same mother language as some of the NCS children helped explain the consent letters to the parents.

3.3.3   Research questions

Marton & Tsui (2004) illustrated how to investigate teaching and learning using the

phenomenographic study, three research questions were formulated according to this approach:

1. What do the Chinese teachers intend to teach? (Intended Object of Learning)

2. What do the Chinese teachers enact in their Chinese teaching in the classrooms? (Enacted Object of Learning)

3. What are the preschool NCS children able to perform after the teaching of their Chinese teachers in the class? (Lived Object of Learning)?

3.3.4   Data Collection Methods

The methods for collecting data for the present research included classroom observations, field notes, interviews, video and audio recordings, collection of the artefacts and photographic documentation. A table detailing the types of data collected is shown in Appendix II

(A) Classroom observations

Gebhard & Oprandy (1999) states the definition of classroom observations as a nonjudgmental description of classroom events that can be analyzed and given interpretation. In the present study, the classroom observation was actually the central part of the study. The researcher conducted classroom observations by observing the classes twice a week, especially during their daily Chinese character writing demonstration time, for twelve weeks. The researcher stayed in the classrooms for one and a half hours in each visit. In order to understand the teacher's intended teaching objectives, the researcher obtained the Chinese character lesson plans beforehand. The researcher observed the demonstrations of the Chinese character writing in order to capture the teaching approaches of each Chinese teacher participant. Then the researcher stayed in the classroom until the NCS preschool children

finished their character handwriting exercises. The classroom observations for each class were around 36 hours by 24 visits. The video and audio recordings of the classroom observations supplemented the field notes, details of which are outlined below.

(B) Field notes

Field-notes were taken during the researcher's classroom observations. The researcher used a notebook to record what she saw and heard. These records provided her with valuable contextual information and evidence to gain new understanding of the phenomena. In particular, the researcher focused on the phenomenon of how the Chinese teachers taught character recognition in the classes, such as their literacy activities in the daily schedule. The focus of the field notes included the responses of the NCS preschool children, such as their participation in the character demonstration activities.

(C) Interviews

Traditionally, phenomenographic approach is used to interview to access people's ways of experiencing selected phenomena, for example, the students read the assigned text before they were interviewed (Marton, 1981). However, in this study, the purpose of the interviews with the Chinese teachers was to find out how they understood teaching Chinese characters to the NCS preschool children. The first part of the data the Intended Object of Learning was related to the ways of the teacher's understanding. Saljo (1997) questions the assumption the interview data refer to ways of experiencing.

> He proposed distinguishing between ways of experiencing and ways
> of their understanding when he said: What we are studying is what
> people say and it would seem wise to refer to this object of inquiry
> as "accounting practices"….This unit of analysis refers to ways of
> understanding, talking, arguing and in general, ways of bringing

the world into language in order to be able to communicate. (p.178)

Thus, in the present research, the interviews with the Chinese teachers were directed toward obtaining individual accounts of the phenomenon under investigation. They were asked to talk about (i.e., to provide an account of) their views of teaching characters to the preschool children in the class. Semi-structured questions were used in the interviews (see Appendix III). It means that within the questions there is room for the interviewee to choose a perspective, the researcher to follow up the answer and get the interviewee to develop his/her thoughts as far as possible (Pramling, 1996). The interviews for the teachers were conducted after the period of classroom visits. This helps to ensure that all interviewees received the same information from the researcher and their responses were about the same phenomenon (Akerlind, 2005). The teacher participants were interviewed individually and in Cantonese. The researcher aimed to keep the interviews as open as she could to the teacher's own view of their understanding of teaching characters in the class. All interviews were audio-recorded. All the transcripts were analyzed after the completion of formal data collection. This was to avoid distorting the research data. The researcher transcribed all the audio-recorded interviews verbatim in Chinese which were then sent to the teachers for confirmation individually. In order to restore the original expressions of the participants for further analysis, only the transcripts selected for use in the report of the study (i.e., this thesis) were translated into English.

In listening to and observing the children, the researcher must work with aspects of the children's reality that are meaningful and important to the children (Pramling, 1983). In interviewing the NCS preschool children, considering their young age and Cantonese being their second language, the researcher was assisted by the Chinese teachers because their teachers were more familiar with their abilities in comprehending Cantonese. The interviews

were conducted after the children had finished their character handwriting exercises towards the end of each class visit. Due to the children's young age, the interview had to be short and informal, and adapt to be like context-like conversations (Graue & Walsh, 1998). The interview questions were shown in Appendix IV. As a usual practice, each child in the class had to show his/her exercise book to their Chinese teacher after they had completed their character handwriting exercises. When showing their exercise books to the teacher, the children also had to pronounce and explain the meaning of the characters that had been written to the teachers. The performances of the NCS preschool children were recorded by video-taping. When they were telling the teachers what they had written, the researcher would take the opportunity to ask the NCS children how they learnt to write the characters or what the teacher had said in the character writing demonstration time.

(D)Video and audio recordings

Video and audio recordings were taken during the regular Chinese character teaching time in the classroom. The character writing demonstration time was done by the teachers and usually took 10 to 20 minutes, and the preschool children learnt as one large group. Then the children were divided into different small groups. The groups took turns to engage in different activities during the 60-minute activity time. One of the activities was to allow the children to complete their assigned written characters exercises and the other writing task, such as numbers or English, would took up around 20 minutes. If there were more than one NCS child in the same class, they would be assigned to different time slots to do their character written exercises so that the researcher could video-record them individually when they were completing their character handwriting exercises. During the activity time, the NCS preschool children played with the other native Chinese speaking children whom the researcher had no permission to videotape. However, the researcher could record their

behaviors with my field notes. The video and audio recordings done were not analyzed until the completion of the formal data collection. Again, this was done to avoid distorting the research data.

(E)Writing artifacts

The researcher asked for permission from the Chinese teachers to collect their lesson plans before my classroom visits. The researcher also asked for the permission from the Chinese teachers and the parents of the NCS preschool children when the researcher collected their Chinese handwriting artifacts.

(F) Photographic documentations

In order to examine the instructional activities that the teachers used in teaching characters in the classrooms, photographic documentations were used as another data collection strategy. Beyond the lesson time, the researcher conducted photographic documentations on the Chinese characters environment in the classrooms in order to collect evidence for how the Chinese teachers implemented their character teaching approach in the classroom. Photos of the Chinese decorations in the class and the Chinese characters activities were taken to show characters and activities the NCS preschool children were exposed to in their classroom environments. In addition, photographs of the written characters by both the NCS preschool children and the Chinese teachers were taken after the class activity time.

3.4   Data Analysis

The aim of the present research is to characterize the conceptions which are implicit in the descriptions of the three particular phenomena (the intended, the enacted and the lived objects of learning) studied. There are no standardized procedures for phenomenographic data analysis and steps for phenomenographic researchers to follow. Yates et al. (2012) point out

there is no single process or technique prescribed for the analysis of phenomenographic data and an array of approaches have been reported in the literature, such as Marton et al. (1992), Sandberg (1997) and Dahlgen & Fallsberg (1991).   The details are shown in the following.

Marton et al., (1992) detailed a four-stage approach which involves: (i) identifying relevant data as 'pool of meanings'; (ii) sorting data into 'pool of meanings' based on similarity and exclusive of reference to individual participants; (iii) contrasting groups of similar data and writing a category of description for each; and (iv) verifying a reporting of the data by engaging an independent judge to establish inter-judge reliability.

Sandberg (1997) suggested a five-step process for phenomenographic analysis.   This process comprise of (i) orienting to the phenomenon as and how it appears; (ii) describing what constitutes the experiences; (iii) horiontalisation: treating all aspects of the lived experience as equally important; (iv) searching for structural features or the basic meaning structure of the experiences; and (v) using intentionality as a correlational rule, which can further assist explicating.

Dahlgen & Fallsberg (1991) offered a seven-stage cycle of analysis.   The stages comprise of familiarization, condensation, comparison, grouping, articulating, labeling and contrasting. They described the technique of analysis as being an iterative rather than sequential process, which continues until the analysis is complete.

Despite the lack of methodological algorithms, according to Akerlind (2002), common principles of practice exist.   She states the three principles as follow: (i) any predetermined views or drawing conclusions too quickly about the nature of the categories of description should be avoided; (ii) focus on the collective experience is maintained by viewing the transcripts and the emerging categories of description as a set; and (iii) search for meaning from the relationship between of all the data and the structural meanings.

In order to response to the three guidelines Marton & Booth (1997) suggest using "brackets" in the phenomenography approach, which means suspending judgments. Phenomenographic researchers must approach the data open-mindedly without any input from their perspectives. Ashworth and Lucas (2000) advocate that the researcher should avoid making assumptions and providing comments about the participants' responses. For example, the researcher should not make any comments on the participants' experiences so that the researcher could be faithful to the participants' experiences. The researcher just focused on the collect data to interpret what the participants' experience in the phenomenon. All video and audio recordings were fully transcribed in Chinese. When coding the researcher created a system using pseudonyms and dates, for example, the four teachers were named Teachers A to D and date recorded was shown in the format of year, month and then day. For example, a teaching excerpt was taken on 12th November, 2015 in the class of Teacher A would be named A_20151112. The researcher did not set any bench mark categories into any teaching activities. Lam (2006), points out the researcher should 'bracket out' his/her understanding of the findings of other previous studies on teaching Chinese characters. The researcher was encouraged to use intuition to examine the teaching activities throughout the research process. Then the researcher started the early stage of her data analysis.

In the present research, the researcher observed the teaching activities in the classroom. The video- and audio-taped material provided the most information to contribute to the data collection. The past experiences of the researchers mentioned in the studies above were related to the interview people. These analysis procedures provide insights for the present research's analytical processes. The present research adopted the method of Marton & Saljo (1984). The data analysis was processed in two steps. It means the research had to contrast the teaching activities against each other, which went back and forth between the two

steps to strive for coherence. Gradually, an initial set of categories of description of the teaching activities was a discovery procedure. These two steps were an iterative process until the analysis was complete.

The first step was a selection procedure carried out within each teaching and learning episode according to the commonalities and differences. In other words, the researcher should focus on the similarities and differences between the ways in which the phenomenon appears to the participants. Patrick (2000) points out that the researcher should not assign the data collected into only one specific category when sorting and grouping the data. Therefore, some data collected in the present research were grouped or sorted into more than one category. For example, the second part of the data collection was related to how the teaching activities were implemented in the class. The teaching activities were not limited to the character writing demonstrations on the whiteboard; they also included different strategies individual teachers used in capturing the children's attention during the teaching activities. One of the participating teachers implemented a special physical exercise to teach the basic structure of the characters. The data were related to the two kinds of experiences in this learning situation. One kind of experiences was the structure of the characters and another was the children's participation into the teaching activities.

The second step was the shift of attention from the individual data to the 'pool of meanings' consisting of the relevant episodes selected. For example, the teaching oral instructions from the participating teachers were divided into the unit as explaining the meaning of the characters or structuring the grapheme of the characters. Each kind of the teaching oral instructions was constituted by the participating teachers in the same phenomenon. It means the data from each participant were assigned to different categories. For this reason, data obtained from the individual participants contributed to different categories. It is

acknowledged that 'generalisations across individuals are of value, but it is important that the individual's unique experience is not lost' (Ashworth & Lucas, 2000). For example, the researcher created a table to list the transcription of the four participating teachers' instructions in order to form the potential themes and topics. The researcher did not neglect the individual data which was to be identified in the preschools. For example, one of the participating teachers mentioned her character teaching to be used in promoting Chinese culture to the NCS children especially the characters in relation to the name of the traditional food. In general, we agree that language is a part of a culture of society because the characters are a part of the language.

Akerlind thinks the thematic groups from the similar groups were presented on the same level. However no conclusion had yet been drawn at this stage, different dimensions within a thematic group would be looked for. The dimensions found would then create sub-groups under the suggested thematic groups (Akerlind, 2005). For example, in the findings, one of the categories in the enacted object of learning was the teachers to invite the children to participate in the character writing demonstration on the whiteboard. It was found to have two patterns of participation which were group participation and individual participation. The two patterns of participation became the two subcategories under categories in the enacted object of learning.

The categories of description were arranged based on the logical relations among the categories and were presented as a hierarchy. The connections made between these 'categories of description' constitute the 'outcome space' (Marton & Booth, 1997; Richardson, 1999). Marton and Booth (1997) suggest three criteria for evaluating the quality of the outcome spaces: (a) Individual categories of 'outcome space' should reflect something unique or distinctive about the way of experiencing the feature of the phenomena.

(b) The categories should be logically linked and have a relationship that is frequently hierarchical; and (c) The 'outcome space' should be presented by as few categories as possible.

The 'outcome space' reflects the conception of the people in the phenomenon; these conceptions are to represent the experience of the people in the same situation. The 'outcome space' is shown in the three figures which are Figures 7 (pp.79), 8 (pp.98) and 9 (pp,134). The three figures are (i) what the teacher's conception in understanding of the character writing in the local preschools; (ii) what the teacher's conception in their practice of characters writing in the local preschools; and (iii) what the NCS children's conception of character writing in the local preschools.

3.5   Validity and Trustworthiness

Saljo (1996) points out that the validity of phenomenographic research is based on the quality of the data collection methods. One of the data collection methods is interviews with the teachers and the NCS children. Saljo (1996) also suggests that if the interviews are not carefully designed and conducted, there will be a danger that the researcher and the interviewees are actually not talking about the same thing, affecting the trustworthiness of the study. Therefore, in the present research, interviews were conducted with the NCS preschool children and their teachers in the environment that they were familiar with. The interview with the teachers began with a set of semi-structured questions and the participants were encouraged to explain their ways of understanding the phenomenon. Interviewees were asked to clarify what they had said, and to explain their meaning in order for the researcher to have a better understanding of what they had expressed. In doing so, there were fewer chances of misunderstandings (Limberg, 2000). On the other hand, the teaching episodes

were transcribed based on the audio-recording. The transcripts of the teachers' interviews and their teaching episodes were shown to the Chinese teachers for crosschecking. This procedure can enhance the validity of the result of this phenomenographic research.

Walsh (1994) recommends that the construction of categories must depend in part on how well the researcher him- or her-self understands the phenomenon (situation). In the present research, the researcher was in the classroom when the teacher's character writing demonstrations were recorded. In other words, the researcher was in the same phenomenon (situation) as the NCS children. This was where the participants were situated and what they sensed in the situation. The phenomenon was the teaching activities recorded, namely the enacted object of learning. The NCS children conceived the situation in relation to how the teachers taught in the character writing demonstrations, which was video-recorded at the same time. The videotapes of the NCS children, on the other hand, could show how the NCS children proceeded with character handwriting. Their performances were related to what they had learnt from their teachers. All in all, the video recording data show what the teachers did and what the NCS children learnt on the same day of the teaching and learning episodes, in a particular teaching activity. When the researcher structured the meanings of the categories of description, she took more than fifteen months to go back and forth between the two steps to achieve coherence.

According to Marton (1986), two issues are buried in the call for replicability of scientific results. The first issue concerns the original researcher's discovery of a qualitative variation in conceptions among a group of individuals. Marton (1986) suggests that the original finding of the categories of description by the original researcher is a form of discovery, it is impossible for another researcher to replicate the discoveries. Furthermore, Sandberg (1997) points out that the discoveries of these categories can be the individual's conceptions of an

aspect of reality. The second issue concerns whether other researchers could recognize the conceptions identified by the original researcher, through the categories of description. It is reasonable to request other researchers (co-judges) to read the same data and the categories of description as well. The categories of description serve "as a measurement of the communicability of the findings produced" (Sandberg, 1997). Both the principal and the associate supervisors in this study are experienced in using phenomenographic research in their past studies (Lam, 2006, 2012, 2014, 2016; Tam, 2005). Although in this particular study, it was not considered necessary to have another researcher to read through all the data, the principal and the associate supervisors supervised the data analysis process. The supervision logs recorded the regular meetings during the data analysis process. This process worked to minimize the researcher's subjectivity in the production of knowledge so that the trustworthiness of the research results could be maintained.

3.6 Ethics

For the NCS preschool children in this study, the researcher received written permission from their parents. The consent letters were sent through the participant teachers from the preschool to the parents. The consent letters were in English. In case, the parents of the NCS children had problem with English, the teachers communicated with them orally before they signed the consent letters. The researcher considered with care the NCS preschool children as Cantonese language learners so that she conducted the interview them with assistance by their teachers. The teachers were familiar with the children's ability in comprehending Cantonese, it provided hints for her how on to handle the interviews with them. The principals of the target preschools and the participating teachers signed the consent letters which were in Chinese version. Before the researcher solicited their

signatures, the researcher let the participants understand that they had the right to withdraw from the research anytime they wish.

An ethics application was permitted by the Human Research Ethics Committee, EdUHK.

3.7   Summary

Phenomenographic research aims to describe the various ways that people perceive a phenomenon and how perceptions influence subsequent actions.   In short, phenmenography takes the perspective of learners in investigating learning. Various methods were taken in the present research, it illuminates the different ways data were collected and for what purpose they were obtained.   Following the past experiences of the phenomenographic researchers such as Akerlind (2002), Ashworth and Lucas (2000), Marton & Booth (1997) and Sandberg (1997), this chapter presented the research approach used in the present research.   As discussed, the present research focus was to ensure that the conceptions of the Chinese teachers and the NCS children about character writing in the classroom settings were described faithfully.   To this effect, the researcher implemented a range of proactive strategies, throughout the research process, to guard against potential sources of invalidity and to support and demonstrate the validity of the research finding.

Chapter 4: Data Analysis and Findings

4.1 Introduction

The aim of this chapter is to present the data analysis and the findings of the present study based on the conceptual framework of the three parts in learning situations as suggested by Marton & Tsui (2004), namely the intended object of learning, the enacted object of learning and the lived object of learning. Based on these three parts, three research questions will be answered accordingly, and they are: (1) What do the teachers intend to teach? ; (2) What do the teachers enact in their teaching in the classrooms? and (3) What do the NCS preschool children actually learn from the teaching of the teachers?

The findings are the 'categories of descriptions' which reflect preschool teachers and NCS preschool children ways of seeing Chinese characters writing in their daily classroom experiences. The first part is in **4.2** Intended object of learning, the second part is in **4.3** Enacted object of learning, and the third part is in **4.4** Lived object of learning.

The table (Table 5) on the following page lists the three conceptions within 'Object of Learning':

Table 5

Overviews of Three Parts of Findings

4.2 Intended Object of Learning	**4.3** Enacted Object of Learning	**4.4** Lived Object of Learning.
(1) to use characters in daily lives	(1) to provide a meaningful context for children to connect with their classroom experience	(1) to be able to connect with their daily lives
(2) to understand the structure of characters	(2) to analyse the structure of written characters	(2) to complete the tasks assigned by the teachers
(3) to foster children's interest in writing characters	(3) to demonstrate how to write characters inside square frames	(3) to be integrated into the identity group
(4) to help children to build self-confidence	(4) to provide the opportunities for children to participate in the writing demonstrations on the whiteboard	
(5) to promote the Chinese culture		

4.2   Descriptions of the Intended Object of Learning

Introduction

The following is the first research question in relation to the teaching of the teachers'

intention: Intended Object of Leaning.   The first research question is:

What do the teachers intend in their teaching of writing Chinese characters in the

classrooms?

The aim of this research question is to find out what the preschool teachers thought of their

teaching character writing in local preschools.   This account describes the result of the

'categories of descriptions'.   The five categories of description about teaching character

writing were constituted from the data collection through the interviews with the teachers and

the teaching plans.   The conceptions from the four teachers were categories by the similarity

and difference, not by individual.

The result of the data analysis is as follows:

Analysis of the interview data from the four teachers identified five types of conception held

by them in planning to teach Chinese characters to the preschool children.

The categories of description and outcomes spaces

The characteristics of the five conceptions of understanding in teaching characters are as

follows:

4.2.1   Category 1

Teaching character writing as teaching children to use characters in daily lives

The teachers thought that they could teach characters to the children through their daily life

experience.   The teachers' accounts identified three subcategories.   The first subcategory

1A is the children use the characters they learnt in the classrooms in their daily lives as well.

The second subcategory 1B is that the children should be familiar with the phoneme and

meaning of characters through their daily living experience before they learn the graphemes of characters. The third subcategory 1C is that the materials or English could illustrate the meaning of characters for the children because the teaching mediums are related to the children's daily life experience.

4.2.2 Category 2

Teaching character writing as teaching children to understand the structure of characters

The teachers thought that they could teach character writing through enabling children's learning of the structure of characters. The teachers' accounts identified two subcategories. The first subcategory 2Ais to teach the children to know how to structure strokes in writing the grapheme of characters. The second subcategory 2B is to teach the children to identify the components in order to know the phoneme and meaning of characters.

4.2.3 Category 3

Teaching character writing as fostering children's interest in writing characters

This category is to foster the children's interest in writing Chinese characters through a pleasurable atmosphere, children's participation and children's attention.

4.2.3 Category 4

Teaching character writing as helping children to build self-confidence

This category is to enable the non-Chinese speaking children to have positive influence through character writing.

4.2.4 Category 5

Teaching character writing as promoting Chinese culture

This category is to promote Chinese cultural aspects to the non-Chinese speaking children in learning Chinese characters.

Figure 7 Teacher's Conception of Character Writing (Intended Object of Learning)

Category 1:
Teaching character writing as teaching children to use characters in daily lives

- **1A** The children are provided opportunities to use the characters in their daily lives
- **1B** The children are taught the characters which are familiar in their daily lives
- **1C** The teaching mediums for the Teachers used which are related in the children's daily lives daily life

Category 2:
Teaching character writing as teaching children to understand the structure of characters

- **2A** The structure of characters relate to draw strokes in writing characters
- **2B** The structure of characters relate to the meaning, grapheme and phoneme of characters

Category 3:
Teaching character writing as fostering children's interest in character writing

Category 4:
Teaching character writing as helping children to build self-confidence

Category 5:
Teaching character writing as promoting Chinese culture

4.2.1   Category 1

Teaching character writing as teaching children to use characters in daily lives

The following listing is of what the teachers' mentions of their teachings in relation to the children's daily life experience.   The teachers mentioned why the characters need to be familiar to the children before they learnt and the teachers encouraged the children to use the characters after they were taught them.   The three subcategories are illustrated 1A, 1B and 1C from the teachers' interview data in the following.   The following dialogue between the researcher (R) and the teacher (T) well illustrate this.

1A The children are provided opportunities to use the characters in their daily lives

The characteristic of this subcategory is the teachers think that the children should use the characters after they learnt them in the classrooms and their daily lives as well.

T: I encourage the children to talk to each other so that they can understand the characters more than learning from the teacher.   I think that the children can find characters to be interesting if they can use characters more often in daily life.   I believe the children can learn these characters more through using them in daily life. (Teacher A in Question 1)

T: There is a study corner and a free drawing corner in the classroom.   The children can play the characters game in the study corner and practice the characters in the drawing corner. I think that the children revise the characters through playing in the two corners. (Teacher B in Question 1)

T: I encourage the children to learn characters with the computer software because it provides for children using their visual and audio skills.   I believe the computer software

stimulates the children learning to use characters more often than the usual teaching aids. (Teacher C in Question 1)

T: I encourage the Nepalese children to communicate with each other with Chinese because I think it can enhance their comprehension of characters. (Teacher C in Question 4)

The above data lists how the teachers focus on the children to use the characters after they learnt. One of the teachers encouraged the children to use the characters through their daily conversations in the class. Another two teachers provided opportunities for the children to revise the characters while they played in the activity corners, such as drawing corner or computer corner in the classroom. The children had opportunities to use the taught characters through their daily class routine time. One of the teachers thought that the children could enhance their comprehension skills in characters if they talked to each other with Chinese especially the NCS children. The expression of the teachers in this subcategory is in relation to how the children to use characters in their daily experience.

The next two subcategories are related to the teachers' selection of what characters they would teach and what materials or methods they would use to teach characters for the children.

1B The children are taught the characters which are familiar in their daily life

The characteristic of this subcategory is the taught characters should be those the children are familiar with in their daily life so that they had already known the meaning of characters before they learnt to write the shape of characters.

T: When I taught the monthly theme of the animals, I selected the characters for teaching the children based on the children being familiar with them in their daily life experiences, such as ox and sheep.   I think the children have known the grapheme and phoneme of these animals and they have seen the figures in books or in farms.   When I teach the meaning of the characters, I provide the daily life context for the children to practice them, such as the cooking activity.   The children can read and write the name of the food so that they take this opportunity to review the characters which they learnt before.   I do not believe the children can learn characters without practicing them. (Teacher A in Question 1)

T: I recommend the picture books without words to the non-Chinese speaking (NCS) children. The picture books are related to their daily life experience.   It's not only to promote the NCS children's listening and speaking skills when they read these books.   I believe these books can enhance the NCS children to comprehend Chinese vocabularies before they learn to recognize the grapheme of characters in the books. (Teacher D in Question 4)

The above data list is the teachers focus on the curriculum which should be related to the children's living experience.   The first teacher illustrated with examples when she selected the characters from the monthly theme for the children learning to write in relation to the children's daily life experience. She establishes the children have known the meaning of the characters such as the characters of ox and sheep before they learn to write them.   She encouraged the children to practice the written characters through the classroom cooking activity.   The second teacher mentioned that the NCS children could learn to read character

through reading picture books without words.   The NCS children could focus to learn the phoneme of characters through reading pictures only in these books which were related to their daily life experience so that the NCS children could learn better to recognize the shape and meaning of characters.   The expression of the two teachers focused on the curriculum which should be related to the children's living experience.   The next subcategory is what teaching materials or language they used to illustrate the characters in their teachings.

1C The teaching mediums the teachers used which are related in the children's daily life

The characteristic of this subcategory is the teachers think that the concrete objects, pictorial symbols or English can be used for illustrating the meaning of characters for the children because they reckoned these materials and language to be related to the children's daily experience.   The expressions of the teachers focused on the children's daily living experience in relation to their teachings.

T: I use pictorial symbols or concrete objects to illustrate the meaning of the

characters.   I think the symbols or objects stimulate the children's imagination. (Teacher

B in Question 1)

T: I explain the meaning of characters with English vocabularies to the NCS children, it is

because English is popular to use in their daily life. (Teacher D in Question 4)

The first teacher used the symbols or objects to illustrate the meaning of characters and these symbols and objects are related to the children's daily experience.   The second teacher expressed that the NCS children could learn characters through English because the NCS children used to speak English to each other in their daily lives.   Then it caused the teacher to use English vocabularies to illustrate the meaning of characters.

In Conclusion of Category 1

It illustrates how the teachers' ways of teachings had related to the children's daily experience in three subcategories.   The subcategory of 1A is the teachers encourage the children using characters through their daily experience.   The subcategory of 1B is the teachers design the curriculum which should be related to the children's living experience.   The subcategory of 1C is the teachers use the teaching materials or teaching medium in relation to the children's living experience.   The category 1 is the teachers focus on their teaching in relation to daily experience.   The next category illustrates the teachers' accounts in relation to the structure of characters.

4.2.2   Category 2

Teaching character writing as teaching children to understand the structure of characters

The following listing of what the teachers thought of their ways in relation to the structure of characters.   The following two subcategories are from the teachers' various expressions in relation to teach strokes, components and the knowledge of characters.

2A The structure of characters relate to use strokes sequence in character writing

The teachers mentioned that the strokes should be shown clearly with the table of stroke sequence or colour pens or teaching instructions or the divided cross dots square frames or "Chinese Stroke Body Exercise" in order to enhance the children to do the handwriting with stroke sequence.

The teacher mentioned that the table of stroke sequence was useful in teaching strokes

T: I prepared the table of stroke sequence for each taught character in order for the children to

    know how to compose the characters with the strokes and the stroke sequence in character

handwriting. I asked the children to notice the sequence of each stroke in the table of the stroke sequence. For example, the general rules for the basic stroke are horizontal line first and then straight line, left falling stroke line first and then right falling stroke line or a hooked stroke towards left or right. I think the children can follow the sequence of each stroke from the table of stroke sequence so that they may find easily how to copy the characters. The table of stroke sequence is very useful for the children in learning character handwriting. I think that the children should learn the stroke sequence before they start to write the characters in their exercise books. (Teacher A in Question 2)

T: I believe the children are able to use their memory skills to copy characters to their exercise books after my character writing demonstrations. The purpose of my teaching approach "Look and say" is to enhance their memory skills after the children repeat a few times of the stroke squence and the phoneme of the characters. (Teacher B in Question 2)

T: When I demonstrate character writing on the whiteboard, I ask the children to verbalize the stroke sequence with pretend writing in the air with one finger; they look at the table of stroke sequence and read aloud each name of the stroke as well. When they draw and say the name of the strokes, I believe they gain their experiences in writing this character at the same time. (Teacher C in Question 2)

The above data illustrates the teachers saw the table of the stroke sequence as very useful for the children to compose characters. The first teacher said that it is important to show the children how to use strokes to structure the grapheme of characters so that they are able to know how to copy the characters from the whiteboard into their own exercise books. The second teacher said that the children use their memory and visual skills to memory the table

of stroke sequence in order to know how to write the characters into their own exercise books. The third teacher expected the children to gain character writing experience after they looked and read aloud the table of stroke sequence together.   Although the three teachers expressed the table of stroke sequence to be useful, the second and third teacher mentioned how to use the table of stroke sequence yet the first teacher did not.   The second and the third teachers claimed the children should read aloud a few times the table of stroke sequence so that the children are able to memorize how to copy the characters from the whiteboard into their own exercise books.

With the table of stroke sequence to illustrate how to compose characters, the teachers also used coloured pens, a divided cross dots square frames and "Chinese Stroke Body Exercise" to enhance the children's ability to compose with strokes.   The next subcategory is to show the children how to identify the components in order to learn the grapheme, meaning and sound of characters.

The teachers also used teaching instructions, coloured pens, a divided cross dots square frames and "Chinese Stroke Body Exercise" to enhance how the children write character strokes.

T: I told the children how to draw each stroke to structure the characters, for example, I told them the stroke should be extended longer or what the stroke looks alike.

The teacher stated that it was important for the children to be told how to write character strokes in detail.   The teacher gave the sample of her teaching instructions, such as "the stroke should be drawn longer or what the stroke looks alike."

T: I illustrate the linkage and the stroke sequence with coloured pens on the whiteboard.

The children can see clearly some of the two strokes to be joined together or stroke sequence to compose the characters. For example, I taught the character of '土' (means soil) which was written as the cross shape first and then the horizontal line on the bottom. (Teacher B in Question 1)

The teacher thought the coloured pens were useful for illustrating the stroke sequence on the whiteboard. She pointed out that the coloured pens could illustrate clearly the linkages of the stroke sequence on the whiteboard.

T: I would draw a cross line with dots inside the square frame so that the children can see clearly how to use strokes to compose the characters especially for the multiple strokes characters. I believe the square frame is divided by the dots in cross shape so that the children can see clearly the position of the strokes in the square frame. I reckon that the children must learn how to accurately draw the strokes to write characters. (Teacher C in Question 2)

The teacher pointed out that square frames were divided by a cross line with dots inside so that the children could easily see how to compose strokes inside the square frames to structure the grapheme of characters, especially for the multiple strokes characters. She recognized that the children must learn how to accurately draw the strokes to write characters.

T: I use "Chinese Stroke Body Exercise" to teach the children in learning the names and writing directions of the strokes. For example, the children would draw the straight line from top to bottom or the horizontal line from left to right so I found that the children had

improved in how to write character strokes. (Teacher D in Question 2)

The teacher stated that the children could learn better the name of strokes and the writing direction of strokes through the "Chinese Stroke Body Exercise" because the exercise could help the children to learn the names of basic strokes and the directions of strokes.

In summary, the subcategory 2A is how the teachers expressed that the table of stroke sequence could help the children to know how to compose the grapheme of characters with strokes.   Two of the teachers mentioned the children should repeat a few times to read aloud the table of stroke sequence so that the children could memorize how to copy the characters from the whiteboard to their own exercise books.   Besides the teachers used the table of stroke sequence to illustrate how to compose the characters with strokes, the teachers also used teaching instructions, coloured pens, divided cross dots square frames and "Chinese Stroke Body Exercise" to enhance how the children compose the characters with strokes. The next subcategory is the teachers to state how to help the children to identify the components, the meaning, grapheme and phoneme of characters.

2B The structure of characters relate to the meaning, grapheme and phoneme of characters

The teachers expressed to teach the children to recognize the components within characters in order to know the meaning and phoneme of characters.   Furthermore, the teachers mentioned that the children could write the grapheme of characters better if they could recognize the kinds of configurations of characters.   One of the teachers stated that the original form of characters could enhance how the children recognize the grapheme, meaning and phoneme of characters.

T: I explained to the children about the meaning of components and these components use to come from the characters, such as the character of people. (Teacher A in Question 1)

T: When I teach the characters, I immediately consider whether the children can recognize the components. If they learnt these components before, I think these components provide the hints for the children to know the meaning and sound of the characters. I shall ask the children to notice the components. I think that it is important for the children to recognize the components within the characters because the components used to contribute the meaning or sound of characters. (Teacher B in Question 1)

The first teacher told the children the components come from the characters and provided an example of the character of human. The children learnt the character of human before so that they could connect the meaning of people as a component to the taught characters. The second teacher pointed out the components if the children learnt them before. She would ask the children to remember what the character was. They both thought that the children should learn how to identify the components in characters so that the children could acquire the hints to know the meaning or phoneme of characters through some of components. Besides the teachers mentioned reasons why the children should learn to identify the components, two of the teachers stated the kinds of the configurations of the characters could enhance how the children recognize the grapheme of character.

The conversations below show what they thought the children learn to identify the kinds of the configurations of characters.

T: I asked the children to notice kinds of the configuration of the characters, such as the right

and left parts of configuration or the upper and lower parts of configuration so that the children could know better how to write the grapheme of characters. (Teacher A in Question 2)

T: I usually instruct the children to define kinds of configuration of characters because it can help the children to know how to write the grapheme of characters. (Teacher D in Question 2)

The teachers both expressed that they taught the children how to define the kinds of configuration of characters because it could enhance how the children recognize the grapheme of characters that they could remember how to compose the grapheme of characters.

The teachers pointed out that the components and the kinds of configuration of characters could enhance how the children learn characters because it provided hints for the grapheme, phoneme and meaning of characters. Likewise one of the teachers claimed that the original form of characters could help the children to deepen their knowledge about the characters' structures.

T: I showed the original form of characters to the children in order to enhance the knowledge of the structure of characters. For example, the grapheme of characters of "mountain", "small" and "hand" which are pictorial symbols to associate the written characters in ancestral forms. (Teacher D in Question 2)

The teacher thought that the original form of characters could show the pictorial symbols to compare the same characters in modern forms. The children could gain their knowledge

about the grapheme, phoneme and meaning of characters through the same character in different graphemes.

In summary, the subcategory 2B is the teachers' expressions of their teachings in relation to the components, the kinds of configuration of characters and the original form of characters. They believed the children to be benefited in the meaning, phoneme and grapheme of characters with the display teaching approaches in above.

In Conclusion of Category 2

It has two subcategories in relation to Category 2. The subcategory 2A is what the teachers' expressions in teaching characters with the strokes. The teachers used the table of stroke sequence to illustrate how to compose characters with strokes, the teachers also used teaching instructions, coloured pens, divided cross dots square frames and "Chinese Stroke Body Exercise" to enhance how the children write strokes. The subcategory 2B is where the teachers pointed out the components, the kinds of configuration of characters and the original form of characters that could enhance how the children know the meaning, phoneme and grapheme of characters. The category 2 is where the teachers focus on their teaching in relation to the structure of characters. The next category is where the teachers focus on their teachings on why the children should be interested in writing characters.

4.2.3   Category 3

Teaching character writing as fostering children's interest in character handwriting

The characteristic of this category is the teachers focus on the children's interest in writing Chinese characters through a pleasurable atmosphere, children's participation and children's

attentions.

T: During my character writing demonstration, I pretended to be a child to conduct the children reading aloud the table of stroke sequence and pretend writing characters in the air with fingers as well. I believe the children enjoy learning character writing together. (Teacher A in Question 3)

T: I usually involve the children in character writing demonstration on the whiteboard. I believe that the children enjoy writing characters in front of the other children on the whiteboard. I recognize that when the children learn character writing with pleasure then they feel less difficulty in learning characters. I choose the storybooks for storytelling which are based on the principles of the children's interest and entertaining. (Teacher B in Question 3)

T: I usually play games with the children during my character writing demonstration time. I think the children would react against the teaching if it focused on the knowledge of character writing. (Teacher D in Question 3)

The first teacher said that the children should be in a pleasurable atmosphere through reading aloud the table of stroke orders together. The second teacher said that the children should enjoy writing characters in front of the other children on the whiteboard so that she involved the children in character writing demonstration on the whiteboard. The third teacher believed that the children learnt character writing through play so her teaching could attract the children's attentions.

In Conclusion of Category 3

Category 3 is when the teachers claim their ways of teaching characters is in relation to the feelings of the children. The children's interest can motivate their learning to participate in group or individually on writing characters during the character writing demonstration time. The children would play attention to the teachers' demonstration if they are interested in the character writing. The category 3 is when the teacher focused on teaching how to attract the children to learning character writing. The next category is the teacher focus on how the children regard their teaching.

4.2.4 Category 4

Teaching character writing as helping children to build self-confidence

The following listing is of what the teachers said about their ways of teaching in relation to helping children to build up their self-confidence. The teachers were concerned with how the NCS children came to regard character writing. I illustrate the two teachers' expression in relation to fostering children's positive influence in the following.

T: I think that the children gain confidence after they are able to write characters correctly. It means they know how to write and recognize the grapheme of characters. (Teacher A in Question 4)

T: I usually discuss with the children the meaning, the phoneme and the meaning of characters during the character writing demonstration time, I was advised to ask simple questions so that the NCS children were able to participate in answering my questions. I recognize the NCS children who can answer my questions to have achievement. (Teacher C in Question 4)

The first teacher pointed out that the NCS children would gain confidence by doing character writing without mistakes. The second teacher claimed that the NCS children had achievement if they could answer the teacher's questions during the time for character writing demonstration.

In Conclusion of Category 4

Category 4 is the teachers' expression about how the NCS children built their self-confidence beyond character writing skills. The teachers focused on how the NCS children regard their teaching. If the children could write characters accurately without mistake or they could answer the teacher's question the teachers believed they could gain self-confidence. The teachers expressed their teachings were not only to teach the skill for character writing. The category 4 is when the teachers focused on the NCS children to gain positive influences that were self-confidence or achievement. The next category is when the teacher focus is on the NCS children to gain the knowledge of Chinese culture through her teaching character writing.

4.2.5 Category 5

Teaching character writing as promoting Chinese culture

The following listing of what the teacher said about how teaching character writing promoted Chinese culture. The characteristic of category 5 is the teacher focused on how the NCS children in her class regard her teaching activities which were in relation to character learning.

T: The curriculum of the monthly theme includes Chinese cultural aspects. For example,

when they learnt the name of Chinese snack "icy sweet gourd", I conducted the children to make this snack as a class cooking activity.   The NCS children tasted the snack so that they knew more about one of the snacks in Chinese society. (Teacher A in Question 4)

In Conclusion of Category 5

Category 5 is when the teacher focus is on her teaching how the NCS children gain the knowledge of Chinese culture.   The teacher described her activity as having the mission of promoting Chinese culture so that the NCS children could widen their visions on Chinese culture through learning characters.

4.3 Descriptions of Enacted Object of Learning

Introduction

The following account describes the result of the data analysis in relation to the second research question of this study:

What do the teachers enact in their teaching of the writing of Chinese

characters in the classrooms?

The teachers taught Chinese character writing in the classrooms. The teachers actually enacted these ways of teaching character writing in the classrooms. Each way of teaching is not taken from any individual teacher, but from a kind of collective intellect (Marton, 1981), teachers may move from one category to another in various situations.

The result of the data analysis is as follows:

The data collected from classroom observations, video- and audio recordings, field notes, writing artifacts and photographic documentation. Four types of conception were identified in Enacted object of learning.

The categories of description and outcomes spaces

The characteristics of the four conceptions of teaching character writing are as follows:

4.3.1 Category 1

Teaching character writing as providing a meaningful context for children to

connect with their daily lives

The teachers prompt the children to remember what daily experiences are related to the written characters. The children discuss the meaning of the characters through dialogue with the teachers. Furthermore, the teachers use the concrete objects or picture symbols or

English that the children are familiar with in their surroundings to associate with the meaning of the written characters.

4.3.2　Category 2

Teaching character writing as analyzing the structure of written characters

Written character is structured by stroke and component. The purpose of this teaching approach is to enhance the children's understanding of the relationship between components and characters, or strokes and characters, so that the children are able to decompose, or use orthography to write characters.

4.3.3　Category 3

Teaching character writing as demonstrating how to write a character inside a square frame

The teachers use the square frame as a tool for showing the children how to write each stroke or component accurately to structure a character. The square frame has the general design of an empty square with four equal sides or special design which is divided by a cross lines with dots.

4.3.4　Category 4

Teaching character writing as providing the opportunities for children to

participate in the writing demonstrations on the whiteboard

The teachers involve the children in participation in the whiteboard teaching activity. The children participate in the teaching activity in a group or individually. The purpose of this teaching approach is to enhance the children's interest in learning character writing.

The researcher will elaborate on these four categories of teaching in the succeeding sections.

Figure (8) Teacher's Conceptions of Character Writing (Enacted of Learning)

Category 1:
Providing a meaningful context for children to connect with their classroom experience

1A   Using the written characters in the sentence through dialogue

1B   Using the concrete objects to explain the meaning

1C   Using pictorial symbol and English to explain the meaning of the characters

Category 2:
Analyzing the structure of written characters

2A   Using the foundational knowledge of Chinese characters

2B   Constructing by components

2C   Constructing by strokes

2D   Using table of stroke order

Category 3
Demonstrating how to write a character inside a square frame

3A   Using and empty square frame

3B   Using with a divided by dotted lines into four parts square frame
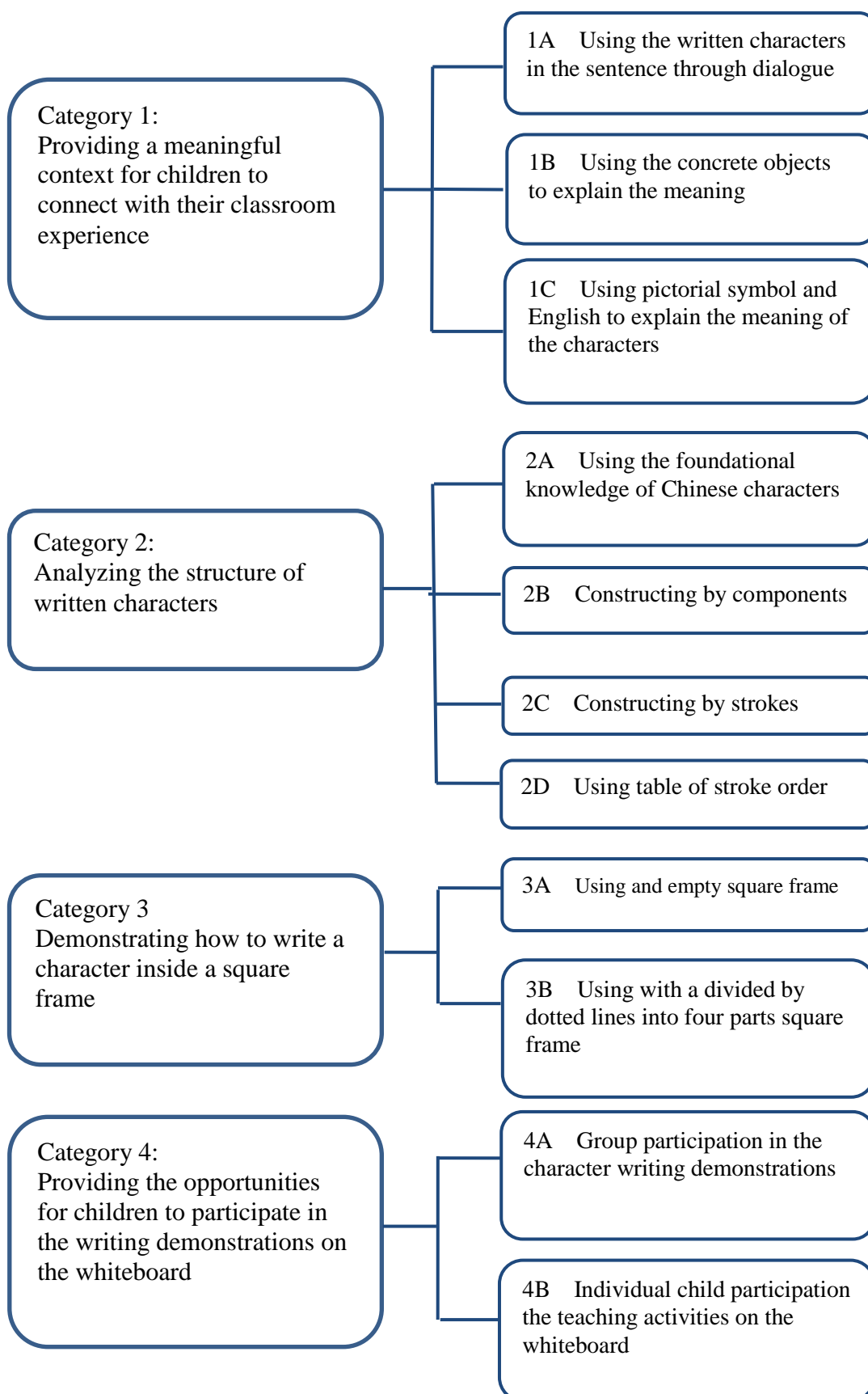
Category 4:
Providing the opportunities for children to participate in the writing demonstrations on the whiteboard

4A   Group participation in the character writing demonstrations

4B   Individual child participation the teaching activities on the whiteboard

4.3.1   Category 1

Teaching character writing as providing a meaningful context for children to

connect with their daily lives

The teachers prompt the children to consider how their daily experience relates to the written

characters through dialogue, concrete object and symbol.

Category 1 has the following three subcategories.

1A Teaching character writing as using the written characters in the sentence through

  dialogue

The teachers taught two kinds of written characters.   The written characters

are directly used in dialogue in the excerpt (1A-1).   The written characters are indirectly

used in dialogue in the excerpt (1A-2).

Excerpt 1A-1   *Teaching characters:* 休息 *"jau1sik1"* (rest)

  Teacher：What does mean 休息 *"jau1sik1"*(rest)?

  One of children: 休息*"jau1 sik1"*(rest)means 瞓覺*"fan3 gaau3"* (sleeping).

  Teacher：Yes, sleeping is one kind of rest. What does 休息*"jau1 sik1"*(rest) mean something else?

  One of children:休息*"jau1 sik1"*(rest) is 玩*"waan4"* (play).

  One of Children:休息*"jau1 sik1"*(rest) is to sit down and do not do anything.

  Teacher: Rest means sit down. Maybe you are tired after running.   In order to help you feel

      less tired, you sit down and rest so it is 休息*"jau1 sik1"*(rest).   Sometimes you are tired after

      you have worked.   When you feel sleepy, you might want to sleep.   What could you do if

      you want to take a rest?

  One of children: Drink water.

Teacher: Yes, you might sit down, drink water and take a rest

One of children: Sit next to my daddy.

Teacher: Sit next with your daddy. Yes, sometimes we sit down and read a book or look around in order to rest.   Or you look through the window to enjoy the scenery or take a rest after working on something.   The above are all examples of the meaning of rest.

The excerpt (1A-1) illustrates how the teacher asked the children to express what they thought was the meaning of *"rest"*.   The children were able to use their experiences to relate to the meaning of "rest".   Then the teacher concluded with the wider meaning of "*rest*", such as sit down, drink water or sleep.   The teacher let the children talk about their thoughts before she told them the meaning of the written characters through dialogue.

Excerpt (1A-2)   *Teaching characters:* 昨天 *"zok6 tin1"*(yesterday)

The teacher asked the children to tell what they did the day before her character writing demonstrations day. The excerpt (1A-2)   illustrates how the teacher asked the children to share information about what they did "尋日" *"cam4 jat6"*(yesterday) in Cantonese written forms so as to explain that the same meaning of yesterday has different written forms in Putonghua namely characters of 昨天*"zok6 tin1"*(yesterday).

Teacher：Yesterday we wrote the word of 今天*"gam1 tin1"*(today). Today we write the word of 昨天 *"zok6 tin1"*(yesterday).   We're going to talk about 尋日 *"cam4 jat6"* (yesterday). What did you do yesterday?

Child 1: My homework.

Child 2: Open the door for my daddy.

Child 3: I revise my book

Teacher：We use 尋日 *"cam4 jat6"*(yesterday) to say in a verbal word, but we use 昨天*"zok6tin1"* means yesterday) in a written word.

Children：昨天*"zok6 tin1"*(yesterday).

The excerpt (1A-2) illustrates how the teacher asked the children what they have done the day before. The children were able to tell what they did through their daily lives and their experiences. The teacher provided a meaningful context for the children in order to help them understand the meaning of the written characters 昨天*"zok6 tin1"* (yesterday).

The subcategory 1A is to link up the children's life experiences with the written characters through dialogue. The difference between the (1A-1) and the (1A-2) is whether the written characters are said to be directly in Cantonese in daily lives. Cantonese and Putonghua are both written forms language in Chinese. If the written formsare commonly used in both Putonghua form and Cantonese form, the use of the Putonghua form is encouraged for written characters. The written characters of 休息*"jau1 sik1"*(rest) are used to say it directly in the Cantonese form in daily lives and are used in Putonghua form. However the written characters of 昨天*"zok6 tin1"*(yesterday) are not used to say it in Cantonese form, the teacher explained Cantonese form 尋日 *"cam4jat6"*(yesterday) to be the same as the meaning of Putonghua form of 昨天 *"zok6 tin1"*(yesterday). The written characters of 昨天*"zok 6tin1"*(yesterday) are used to say it in Putonghua form.

1B Teaching character writing as using the concrete objects to explain the meaning of the characters

The teachers discussed with the children a concrete object that the children

were familiar with in the classroom and how it could affect their daily lives so in that discussion the teacher gave the meaning of the written characters. The concrete object is used in this subcategory to differ from the previous subcategory for the dialogue only.

<u>Excerpt 1B-1</u>   *Teaching characters:* 時間*"si4 gaan3"* (time)
　　　Teacher：Today we're going to write 時間*"si4 gaan3"*(time). What is 時間*"si4 gaan3"*(time)?

One of children: 'Time' goes like 'merry-go-round'.

Teacher: Yes. Really, Children, do you know 'time' is always running, isn't it?

Some of children: No.

Teacher: No. For example, we came back here at nine o'clock. Now you look at the clock. What time it has run to?

One of children: It has run to ten thirty-five.

Teacher: It is still nine o'clock. What is the long hand pointing to now?

Some of children: Seven

Teacher: Seven. Really it has run to nine thirty-five.

The above excerpt illustrates how the teacher used a clock in the classroom to explain the meaning of how time affects the children's routine activities. The teacher told the children about the concept of the time through the two pointing hands in the clock. Furthermore she made the children notice the time passing on the clock through counting the number on the clock, such as "nine thirty-five". The teacher demonstrated for the children how to use the mentioned characters "time" in the daily life.

1C Teaching character writing as using pictorial symbol and English to explain the meaning of the characters

The teacher drew the pictorial symbols and used English in order to make the children associate the meaning of the written characters. Furthermore English is especially useful for non-Chinese speaking children. The pictorial symbols and English are used in this subcategory to differ from the dialogue and the concrete objects to be used in the previous two subcategories.

Excerpt 1C-1   *Teaching characters:* 牛奶 **"ngau4naai5"**(milk)
The teacher drew a pictorial symbol of a bottle and fruit before she started her characters writing demonstration in the picture below.

Teacher: English word is milk. What Chinese word is it?

Children: 牛奶 "*ngau4 naai5*" (milk)

Teacher: How to write 牛奶 "*ngau4 naai5*" (milk)?

The above excerpt illustrates how the teacher used the pictorial symbols and English to connect with the meaning of the characters.

In Conclusion of Category 1

Category 1 is based on the children's daily life experiences. The three subcategories in Category 1, the subcategory1A is mainly the dialogues between the children and the teachers. The children spoke up about how their daily lives and experiences relate to the written characters on the whiteboards. The subcategory 1B and subcategory 1C used the objects or symbols and English to illustrate the meaning of the written characters besides their dialogues.

4.3.2   Category 2

Teaching character writing as analyzing the structure of written characters

The teachers analyzed the structure of written characters so that the children are able to decompose, or use orthography to write characters. Besides the structure of written

characters, the teachers also taught the formations of Chinese characters, such as the original written form in ancestor time. The teachers illustrated how to get the phoneme and meaning through the components within the characters. This teaching approach is to enhance the children's ability to write characters as well as reading characters.

Category B has the following four subcategories.

2A Teaching characters as using the foundational knowledge of Chinese characters

The teachers aimed to enhance the children's base knowledge of characters so that the children were taught the sound of the character to be one character for one syllable and the original form of the characters in ancestor time.

Excerpt 2A-1
Teaching character writing as illustrating one character for one syllable

> *Teaching characters:* 我用水澆花*"ngo5 jung6 seoi2 giu1 faa1"* (I water flowers).
>
> Teacher: Let's say it once more.
>
> Teacher and the children: I water the flowers and full stop.

i　　　ii　　　iii　　　iv
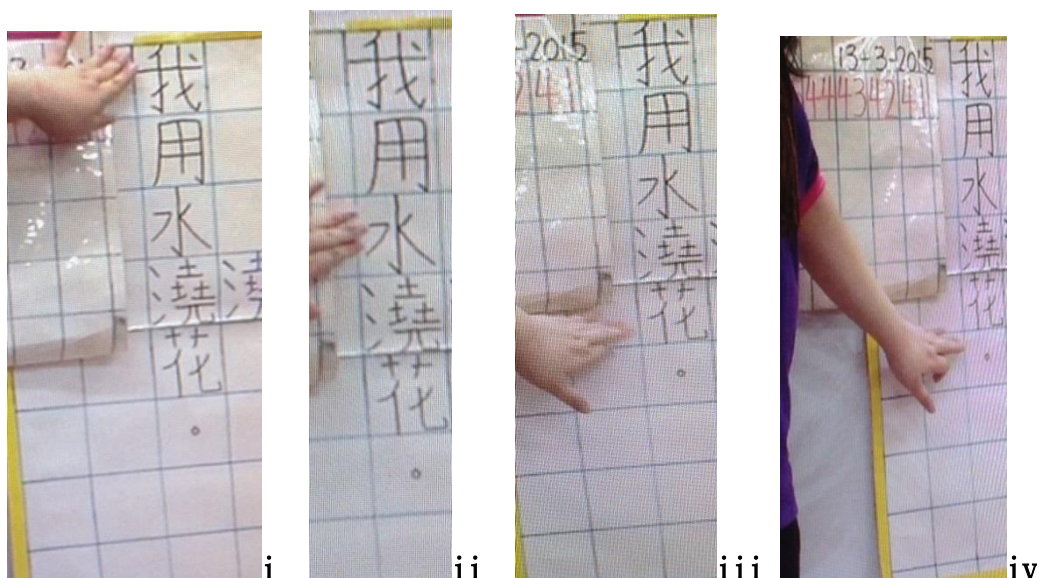
The above excerpt illustrates how the teacher used what had been written down on the whiteboard to teach the characteristic of Chinese character which is one character one

syllable. When she pointed to the particular character, she also read it aloud at the same time all the way down to the full stop. (Picture from above (i) to (iv) shows the process). Every time the teacher showed how to pronounce each character, she deliberately pointed to each character one after another, in order to let the children know the characteristic of the sound of the Chinese character.

<u>Excerpt 2A-2</u>

Teaching character writing as illustrating the original form of a character

After the teacher completed her characters writing demonstration on the whiteboard, she explained to the children the grapheme of the character of 魚*"jyu4"*(fish). She associated the written character with the original written form of fish in ancient age.

i   ii   iii

Teaching character : the character of 魚"*jyu4*" (fish)

Teacher: let's take a look at the stroke sequence of the character of fish, right falling stroke, doesn't it look like how to draw a dorsal fin in the following, horizontal and vertical stroke, and then what?

Children: the component of 田"*tin4*" (field).

Teacher: right, the component of 田"*tin4*" (field), and then what?

Children: dot.

Teacher: how many dots are there?

Children: four.

Teacher: right, four dots. Do you remember I told you before what was the pictorial origin writing of

the character of fish.

Children: head, body trunk and tail.

Teacher: right, it represents head, body trunk and tail. 【The teacher pointed to the upper part, middle part and the lower part of the character of fish with a pen while she was talking which were showed in pictures (i) to (iii)】

The above excerpt and the pictures (i) to (iii) illustrate how the teacher taught the children to associate the written character with the pictorial writing which is the original form of fish in ancient age.

In summary, the subcategories of (2A-1) and (2A-2) are how the teachers use the written characters on the whiteboard to show the principle of the sound and the meaning of the characters. It aimed to enhance the children's foundational knowledge of the written characters. The following subcategory is to illustrate components within the characters.

2B Teaching characters as construct by components

The purpose of this teaching approach is to enhance the children's ability to understand the relationship between component and character so that the children are able to decompose, or use orthography in writing characters. Components provide clues for Chinese readers when they learn the novel characters. Furthermore most of the characters are structured by two or more than two components which are defined as the different kinds of configuration of characters. For example, the two components are positions in upper and lower or left and right. The kinds of the two components characters would be named upper and lower parts of characters or left and right parts characters. The children are taught the functions of the components that they can enhance their ability to read characters. The following five teaching approaches represent the different functions of the components in the characters that

were used by the teachers to illustrate the effects in the written characters.   The five teaching

approaches are (2B-1) the component is a simple character which becomes a part of a

character; (2B-2) the meaning of components; (2B-3) the position of components; (2B-4) the

sound of a component; (2B-5) the kinds of the configuration of the characters.

(2B-1) teaching character writing as illustrating the component is a simple character which

becomes a part of a character

<u>Excerpt 1 in 2B-1</u>   *Teaching characters:* 節 *"zit3"*(save)
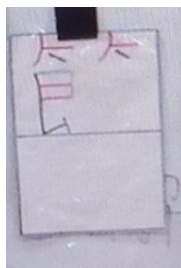
Excerpt 1 in 2B-1

Teacher: All right, let's learn how to compose the character of 節 *"zit3"*(save), it has got 竹花頭*"zuk1 faa1*

tau4" (head of bamboo).

Children : 竹花頭*"zuk1 faa1 tau4"* (head of bamboo).

Teacher : All right, left falling stroke, horizontal stroke and point stroke, but the point stroke does not touch the

horizontal stroke.

Children: No, it doesn't.

Teacher : So the other side is the same as this side.   The point stroke does not touch the horizontal stroke in

the other side either.   Then, horizontal stroke, vertical stroke, horizontal stroke, horizontal stroke,

vertical stroke, hooked stroke and point stroke.   Do you notice this point stroke touches the hooked

stroke? Then what next?

Teacher & Children: horizontal stroke, vertical stroke and hooded stroke.

Teacher : Then the straight stroke.   Do you see that this pattern looks like the opened door ?

Children : Yes, we do.

The above excerpt and the picture (excerpt 1 in 2B-1) illustrate how the teacher conducted the children to identify the character of 竹花頭*"zuk1 faa1 tau4"* (head of bamboo) within the character of 節*"zit3"*(save).　As the teacher told the children, a character can be a component in the composition of a character.

Excerpt 2 in 2B-2

B2a-2

*Teaching character:*傘*"saan3"*(umbrella)

Teacher: Let's take a look, this component is inside of the character of 傘*"saan3"*(umbrella)?　This component is formed by two strokes which is like a roof top.　The two strokes are left falling and right falling strokes.　What is an umbrella to be used for?

Child: Keep people away from wet.

Teacher: People use umbrella to keep themselves away from wet. Therefore, there are four components of people within this character.　Look at the first component of people, two strokes, left falling and right falling strokes.

One of children: Yes. How about the second one?

Teacher: The second one is placed under the first component of people, two strokes, left falling and right falling strokes. Can you see that, the third one is placed next to the first component of people. The last one is placed under the third component of people.　How many components of people are there?

Children: Four components of people.

Teacher: These four components of people are standing all the way down? Or, they are standing two by two neatly?

Children: They stand neatly, two by two.

 Teacher: Really there is a reason behind this. The character of umbrella has got the components of

people.　Let me draw a horizontal stroke on the bottom and then draw a vertical stroke from

the top to cross the horizontal stroke towards down to bottom.　Can you see the components

of people are between the roof top and the cross shape?　It means the people are surrounded

to be kept away from wet.　That is the character of umbrella.

The above excerpt and the picture (excerpt 2 in 2B-2) illustrate how the teacher demonstrated

the amounts and the position of the components inside a character.　At the beginning, the

teacher described the top part of the character 傘"*saan3*"(umbrella) like a roof top in its

shape.　And then the teacher asked the children to count how many components of 人

"*jan4*"(human) and how these components of 人"*jan4*"(human)　are placed. The children

replied with the answer "four" (the four components) and "neatly two by two".　The teacher

aroused the children to consider the structure of the character of 傘"*saan3*"(umbrella) with

counting the amount of components and their positions.

In summary of the two excerpts in the subcategory of (2B-1), the teachers show the children

how a component or components which are characters may become a part of a character.

(2B-2) teaching character writing as illustrating the meaning of components

Excerpt 1 in (2B-2)　　　*Teaching characters:* 椅 "*ji2*" (chair)

Teacher: Chair is made of wood.　The character of 木"*muk6*" (wood) can be found in the character of 椅

"*ji2*"(chair) so 木"*muk6*" (wood)has become a component.　Let's see how the strokes form the

component of wood, horizontal stroke, vertical stroke and then right falling stroke in sequence.

What is the last stroke?

Children:　point stroke.

The above excerpt illustrates how the teacher explained to the children the structure of the character, that the component of 木"*muk6*"(wood) shares the same meaning of the character of wood in the character of 椅"*ji2*"(chair).   The teacher also asked the children to pay attention to the component of wood that has got minor differences from the character of wood. The last stroke of the component of wood would become point stroke instead of right falling stroke.

<u>Excerpt 2 in (2B-2)</u>   *Teaching characters:* 森林 "*sam 1lam4*" (forest)

　　　　Teacher: How to write the two characters of forest?   There are many trees in the forest, therefore we

　　　　　　can see many components of wood in the two characters of forest.

　　　　Teacher and children: Let's start to say the stroke order of wood. Horizontal stroke, vertical stroke,

　　　　　　　right falling and left falling strokes.

　　　　Teacher: Can you see how many components of 木"*muk6*"(wood) in the character of 森"*sam1* "

　　　　　　(forest)?

　　　　Children: Three

　　　　Teacher: Can you see how many components of '木' "*muk6*"(wood) in the character of 林

　　　　　　"*lam4*"(forest)?

　　　　Children: Two

The above excerpt illustrates how the teacher told the children the components of wood structure the two characters of a word of 森林"*sam1 lam4*" forest.   The teacher described the forest to have many trees so the component of wood should be written many times in order to indicate many trees to structure a forest.   The children were requested to count how many of the components of wood are in the word (two characters) of forest in order to address the meaning of the forest.

In summary of the two excerpts in subcategories of (2B-2), the two excerpts are related to show the children about the meaning of the components.   The character of

椅"*ji2*"(chair) is structured by a component of 木"*lam4*"(wood) that reflects the material of chair to be made by wood in the excerpt 1 in (2B-2).　The two characters of a word of 森林 "*sam1 lam4*"(forest) are structured by five similar components of 木"*muk6*"(wood) that represents many trees to structure a forest in the excerpt 2 in (2B-2).

(2B-3) teaching character writing as illustrating the position of components

Excerpt (2B-3)　　*Teacheing two characters:* 可"*ho2*"(may) and 叮 "*ding1*" (a sound)
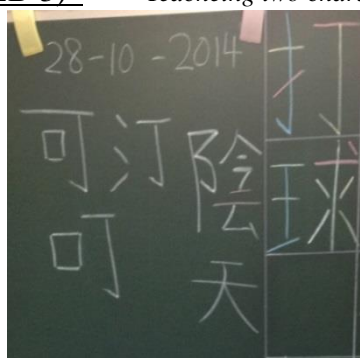
(2B-3)

Teacher: Let's write the component of 丁"*ding2*"(small) in the character of 打"*daa2*"(hit). First, write a horizontal stroke, but not too high or too low, because this component is placed in left side of the character, namely (*"tik1 sau2 bin1"* means the component to represent the meaning of a hand and position on the left hand side), write a horizontal stroke first, then a vertical stroke with hooked stroke, and then a left-to-right diagonal stroke across. The other side component is the component of 丁"*ding2*" (small). The component of 丁"*ding2*" (small) shares the same sound of the character of 叮"*ding2*"(a sound).　I would like to show you another character similar to the character of 叮"*ding2*"(a sound) which is the character of 可"*ho2*"(may).　The two characters are structured by two similar components which are 口 "*hau2*"(mouth) and '丁' "*ding*"(small).　You write the two mentioned components in the equal amount of space inside a square frame that is the character of 叮 "*ding*"(a sound).　You write the component of 口"*hau2*"(mouth) within the component of 丁"*ding2*"(small), it becomes the character of 可 "*ho2*" (may). 【in picture (B2c)】

The above excerpt and the picture (2B-3) illustrate that the spatial structure of the component can make the character look different, such as the components of 口 "*hau2*"(mouth) and 丁"*ding2*"(small), the two characters of 叮"*ding2*"(a sound) and 可 "*ho2*"(may) are structured by the two similar components.   It showed why the teachers have to require the children in processing of writing the strokes and components to do so neatly and accurately to structure the character.

(2B-4) teaching character writing as illustrating the phoneme of a component

Excerpt 2B-4   *Teaching character:* 洋"*joeng4*" (ocean)

Picture 2B-4

Teacher: Look! How to write *the* word of 海洋"*hoi2 joeng4*"(ocean)? Have you written the character of 海 "*hoi2* "(sea) before?

Children: Yes

Teacher: How about the character of 洋" *joeng4*"(ocean)? You haven't. The character of 洋"*joeng4*" (ocean) is structured by two parts.   When the left part of the character is covered, we can see the right part of character which is the character of 羊"*joeng4*" (sheep).   When I uncover the left part of the character, you can see the three dots on the left part.   The character of 洋"*joeng4*"(ocean) has got three dots on the left part.

In the above excerpt, the teacher covered half of the character of 洋"*joeng4*"(ocean) in order to let the children observe the component of 羊"*joeng4*"(sheep) in Picture2B-4.   The teacher taught the children to know the component of 羊"*joeng4*"(sheep) shares the same sound as the character of 洋"*joeng4*"(ocean).

(2B-5) teaching character writing as illustrating the kind of configuration of the characters

2B-5

Excerpt 2B-5   *Teaching two characters:* the character of 茵"*jan1*" (plant) and 菜*"coi3"*(vegetable)

Teacher : One kind of the configuration of the character is upper and lower parts.   Let's take an example

from the name our classmates.   One of the character from her name is 茵"*jan1*"(plant), the

grapheme of the upper part is called 草花頭 *"cou2 faa1 tau4"* (head of plant) which the

component is related to plants), the grapheme of the lower part is the component of 因

"*jan1*"(reason) (the teacher drew a line in between two components in Picture 2B-5).   Let's get

back to the character of 菜"*coi3*"(vegetable), can you see the upper and lower parts of the

character 菜"*coi3*"(vegetable) ?

Children : Yes, indeed.

Teacher : Here is the upper part, the head of plant , here is the lower part, the component of 采

"*coi2*"(plant). 《Picture (2B-5)》

The above excerpt and the picture (2B-5) illustrate that the teacher taught the children the

kind of configuration of the character.   When the teacher asked the children to guess what

kind of configuration of the character of 菜"*coi3*"(vegetable), the children were not able to

tell it.   In order to show similar kind of configuration of character which had got fewer

strokes to the children, the teacher use the character 茵"*jan1*"((a plant) from the name of a

child.   After the children were taught another similar configuration of character with fewer

strokes, they were able to tell what kind of configuration of the character of 菜 "*coi3*"(vegetable).

In summary of the subcategory 2B, there are five teaching approaches to relate the components within a character. The teacher directed the children to compose the upper part of the component of 竹花頭"*zuk1 faa1 tau4*" (head of bamboo) which is from the single character 竹"*zuk1*". The character of 節 "*zit3*"(save) is formed by upper and lower parts in the learning excerpts of (2B-1). The component of 木"*muk6*" (wood) is related to the meaning of the character of 椅"*ji2*"(chair) in the learning excerpts of (2B-2). The teacher prompted the children to notice the position of the component. The two similar components structured two different characters if the positions of the components are placed slightly different in the excerpt (2B-3). The teacher illustrated for the children how to notice the component to share the phoneme of the character in the excerpt (2B-4). Another teacher directed the children to know the kinds of configuration of the characters in the excerpt (2B-5). The subcategory2B differs from the subcategory 2A that the teachers used to illustrate how to use the different functions of components to enhance the children's ability to read and write characters.

2C teaching character writing as construct by strokes

Stroke is the small unit in character writing system. It is important for the teachers to instruct the children how to compose the characters with the strokes. The following teaching excerpts illustrate how the teachers teach the children to compose the characters with the strokes. The teachers aimed at teaching the strokes not only to write the grapheme of a character but the children are required to write the characters to look good. Each

subcategory represents different types of teaching instructions lead the children to write the characters accurately and to look good. The four teaching subcategories are: (2C-1) the spatial structure of stroke; (2C-2) the length of stroke; (2C-3) the amount of similar stroke and (2C-4) the writing direction of the stroke.

(2C-1)   teaching character writing as illustrating the spatial structure of stroke

The teacher explained to the children how to put the strokes to structure a character. It aimed to enhance the children's awareness of the strokes in the specific positions of the characters.

Excerpt (2C-1)   *Teaching character:水 "seoi2"(water)*

Teacher: when you write the character of 水"*seoi2*"(water), you begin with the horizontal stroke and the left falling stroke at the left hand side. Do you know whether the mentioned two strokes connect to the central vertical stroke? No, absolutely not. At the right hand side of the two strokes which should be written at the same level of the left hand side. Imagine of your walking posture, the two sides of your shoulder are at the level. It is impossible to be one side up and one side down of your shoulder. Remember, keep two side of the strokes at the same level.

The above excerpt illustrates how the teacher instructed using the metaphor of the pattern of the strokes so that the children would be able to draw each stroke accurately in character writing. The teacher aimed for the children to notice the spatial structure of the two strokes in writing the character of 水"*seoi2*"(water) so the teacher told the children to imagine how to walk with their shoulders which were two sides to be at the same level. It means the two strokes of the character of 水"*seoi2*"(water) to be like the two sides of their shoulders at the same level.

(2C-2) teaching character writing as illustrating the length of stroke

The teacher explained to the children how to notice the length of the strokes to structure a

character.　It aimed to enhance the children's ability to draw the strokes in the certain

lengths for the children to notice the lengths within the characters.

Excerpt (2C-2)　　　　　*Teaching character: 物"mat6"(thing)*

    Teacher: Let's write the character of 物 "mat6"(thing)

    Teacher and children: Left falling stroke, horizontal stroke, vertical stroke, left falling stroke,

                horizontal stroke, vertical and tick, left falling stroke.

    Teacher: Is the left falling stroke long or short?

    Children: Short left falling stroke.

    Teacher: Right. What's next?

    Children: Long left falling stroke.

The above excerpt illustrates how the teacher encouraged the children to pay attention on the

different lengths of the two left falling strokes when she demonstrated character writing of

the character of 物 "mat6"(thing).

(2C-3) teaching character writing as illustrating the amount of similar stroke

The teacher directed the children to pay attention on the amount of similar strokes in the

written characters.　It aimed to enhance the children's ability to count the similar strokes

within the characters.

Excerpt (2C-3)　　　　　*Teaching character: 具"geoi6(device)*

    Teacher: let's write the character of 具"geoi6"(device)

    Teacher and the children: vertical stroke, horizontal stroke, vertical stroke.

    Teacher: can you tell me how many horizontal strokes inside?

    Children: three horizontal strokes.

    Teacher and children: first, second and third.

The above excerpt illustrates how the teacher asked the children to count the amount of

similar strokes during writing the character of 具"*geoi6*"(device).

(2C-4) teaching character writing as illustrating the direction of the basic strokes

The teacher told the children to pay attention to how to write the direction of the basic strokes in the written characters. It aimed to enhance the children's ability to follow the stroke sequence to structure characters. The direction of the basic stroke is the part of the stroke sequence which is used for learners to structure characters properly.

Excerpt (2C-4)   *teaching character:* 口"*hau2*"(mouth)

Teacher: Watch out, children. Though there is fewer strokes in writing the character of 口
    "*hau* 2"(mouth), will you write the last stroke from right to left.

Children: No, I won't.

Teacher: Good, you mustn't write the last stroke from right to left. You should lift up your pencil after you finish writing the second stroke. Always draw your last stroke from left to right. Imagine, you close the door, you must follow the direction otherwise you cannot close the door tightly.

The above excerpt illustrates how the teacher enables the children to pay attention to how to write the direction of the basic stroke for the character of 口"*hau2*"(mouth). She described the direction of the basic stroke to be like a door which was closed in the correct direction.

In summary, the four teaching approaches in the subcategory B3 are related to the basic strokes which are within the written characters in the character writing demonstrations. The teachers instructed using metaphors of certain patterns of the strokes so that the children would be able to draw each stroke in accurate positions or directions to structure the written characters in the excerpt ((2C-1) and (2C-4). The teachers questioned the children about the length or the amounts of the strokes of the characters during the character writing demonstrations in the excerpt (2C-2) or (2C-3). The strokes of (2C-1) to (2C-4) demonstrate how the teachers state the different kinds of strokes so that the children

are able to write the strokes accurately to structure the written characters.   The subcategory 2C differs from the subcategory 2B that the teachers used for the different kinds of demonstrations of strokes to teach character writing. The following subcategory is to use a table of stroke sequence to teach how to write characters.

2D Teaching character writing as using the table of stroke sequence

The teacher wrote the strokes with the coloured pens in order to make the children pay attention to the strokes linkage and the stroke sequence in the written characters.   The table of stroke sequence of the written character is to illustrate from the top to the bottom which is displayed on the whiteboard.

Excerpt 2D-1   *teaching character: 水"seoi2"(water)*

(2D-1)

The written character of 水"*seoi2*"(water)in the picture 2D-1, the 1st stroke sequence   is the column on the right from the second square frame which is the middle straight line with blank. The 2nd stroke sequence is in the third square frame of the same column which has the two strokes to be drawn together in red.   The teacher aimed to show the linkage of the two strokes in the character of 水"*seoi2*"(water).   The 3rd stroke sequence is in the fourth square frame which has the right falling stroke in blue.   The 4th stroke sequence is in the fifth

square frame which is under the blue right falling stroke to be the left falling stroke in red. The last two strokes are drawn separately in 3rd and 4th stroke sequences so the two strokes are in the blue and red. The subcategory B4 differs from the subcategory B3 that the teachers used the coloured pens for and the table to teach the stroke linkage and the stroke orders.

In Conclusion of Category 2

The four subcategories in category 2 indicate how the teachers use the factors to form Chinese characters in their character writing demonstrations. The teachers taught the children the knowledge of one character for one syllable and the original written forms of the written characters in ancient age in the excerpts (2A). The teachers directed the children about the components to structure the character writing in the excerpts (2B). The teachers illustrated verbally how the different purposes of the strokes affect the characters in order to enhance the children to write characters accurately and to look good in the excerpts (2C). The teacher used different coloured pens and the stroke writing order table to enhance the children's ability to write characters in the excerpt 2D. The category 2 differs from category 1 that the teachers used to illustrate the characters and analysis of the structure of the characters for the children.

4.3.3   Category 3

Demonstrating how to write a character inside a square frame

The teachers used a square frame as a teaching tool for character writing demonstration which was to direct the children how to write a character in a proper way. The teachers instructed children how to organize strokes and components inside a square frame. After

the teachers completed the character writing demonstrations, the children would copy how the teachers had written the characters into the square frames which were printed in their own writing exercise books.   The shape of the square frame on the whiteboard is as similar as in the children's writing exercise books.

Category 3 has the following two subcategories.

3A Teaching character writing as using an empty square frame

The teacher taught the children to write characters inside square frames which are the empty square and four equal sides.   The following illustrations are related to how the teacher was teaching with the square frames.

(3A-1) teaching character writing as illustrating one character for one square frame

The teacher used the page on the whiteboard in order to demonstrate for the children how they should write the characters or the sentence in their exercise books with one character for one square frame.

Picture (3A-1)

The above picture (3A-1) illustrates what the teacher wanted the children to write and how the children should write the characters in their writing exercise books.   It aimed to enhance the children's ability to write each character within each square frame.   The following subcategory illustrates how the teachers instruct the children to allocate the components of a character inside the space of the square frame.

(3A-2) teaching character writing as illustrating the components inside the square frame

The teachers illustrated how to write a character to look good, she instructed the children to divide the square frame into the certain amount of parts. Each component or each stroke was to be written with good balance of the shape of a character.

<u>Excerpt</u> (3A-2)   *Teaching character:* 地 *"dei3"*(land)

Teacher: We can see that there are two components as two part in the character of 地*"dei3"*((land). Please pay attention to it.

Child: The kind of upper and lower part？

Teacher：No, it isn't the kind of upper and lower part. It is the kind of left and right parts. The left part of the character, it is the component 土*"tou1"*((soil). This component of 土*"tou1"*(soil) engages half of the square frame, you should write the component of 土*"tou1"*(soil) first then the other half character is written in the right of the square frame, is that o.k.？

Child: O.k.

Teacher：There is a vertical stroke in the middle, and then a curve stroke with a hook, that is 地 *"dei3"*(land).

The above excerpt illustrates how the teacher taught the children to write the character of 地 *"dei"*(land). The teacher guided the children to pay attention to the two components inside of the character of 地*"dei"*(land) which were on the left and right part of the character. The children were taught to make the two components share half of one square frame when they wrote the written characters in their exercise books. This subcategory is mainly the teacher directing the children with the space of the square frame to write the characters. The following subcategory is the teacher directing the children how to write the strokes between the space and the four surrounding lines of the square frame.

(3A-3) teaching character writing as illustrating the written strokes inside of square frame

The teacher aimed to ensure that the written characters look good so she directed the children how to write each of the strokes to co-ordinate to the four surrounding lines of the square

fame.   The teachers instructed the children to draw the length of the strokes to the bottom line of the square frame.

Picture C1c

Excerpt (3A-3)   *Teaching character:*大*"daai6"* (big) Code: B241115

Teacher: Let's write a character of 大*"daai6"*(big).

Teacher and children: Horizontal stroke.

Teacher: Then, what is next? How about the two feet? Those two feet open very wide. But the left foot

   starts from up above.

Teacher and children: Right falling stroke

Teacher: Make a right falling stroke from here. (Start the stroke from the left falling stroke) Stick to

   this place, and then what?

Children: Left falling stroke

Teacher: Remember, the left falling stroke should "touch ground". This is the character of 大

   "daai6"(big).

The above excerpt illustrates how the teacher instructed for writing the character of 大 *"daai"*(big) inside of the square frame.   When the teacher demonstrated for the children to write the last stroke of the character of 大 *"daai"*(big), she said "touch the ground" which means the left falling stroke to be drawn to the bottom line of the square frame.   The teaching instructions aimed at showing the children to write the strokes in the certain length.

In summary, the square frames are the empty square and four equal sides to be used in the

subcategory 3A.　The strokes and the components have to be of good balance and good looks, from one character in one square frame in the excerpt (3A-1), each component to be written into the divided square frame in the excerpt (3A-2) and each stroke to be written into specific place into the square frame in the excerpt (3A-3).　The following subcategory differs from the subcategory 3A that the square frame is not an empty square.

3B Teaching character writing using a square frame divided by dotted lines into four parts

Some of the characters have multi components.　Before the teacher demonstrated the character writing, she drew a cross with red dotted lines inside the square frame in order to show clearly the processing to write each component and each stroke inside of the divided square frame.　This kind of the square frame is not necessary to be similar to the children's writing exercise books.　Some of the kindergartens will provide the divided by dotted lines into four parts square frame writing exercise books to the non-Chinese speaking children.

Picture 3B

Excerpt 3B　　　　　　　　　*Teaching character:* 鄰*"leon4"*(neighbors)

Teacher：There are many strokes in the character of 鄰*"leon4"*(neighbors).　But, that's o.k. Just use the four compartment frame to help you. First, 鄰*"leon4"*(neighbors) can be divided in this way. This character is difficult to write, but we can use the dotted lines to divide the square frame into four compartments. Good. Let's look at the left side first, what is this component?

Child: 米*"mai5"*(rice)

Teacher：Yes. 米*"mai5"*(rice) is a character yet 米*"mai5"*(rice) is a component in this character.

Child: 米"*mai5*(rice) is written in smaller.

Teacher：Good! Well observation, then write the next one down below of 米"*mai5*"(rice).　You should pay attention, the below has got two part structures, it is like two people standing under the component of 米"*mai5*"(rice).　You might take it as a boy and a girl.　Each of them takes half of the space equally, not one bigger and the other smaller. We take the middle part of the component of 米"*mai5*"(rice) as the central line and divide the space down below into two halves.

Teacher and children：Right falling stroke, horizontal stroke, right falling stroke and a dot at last.

One of children: This component looks like the character of 多"*do1*"(many).

Teacher and children：Horizontal stroke, straight stroke, horizontal stroke, and then straight stroke.

Teacher：Go through that. Good. The other half of the square frame on the right hand side, there is a component that shares the same component in the character of 陳(*'can4'* means display or as surname).

The above excerpt illustrates how the teacher　wrote the character of 鄰"*leon4*"(neighbor) inside a cross dotted lines square frame.　The teacher directed the children how to draw the strokes with a variety of long, short, big and small as well as the space and position of those components to form the character 鄰"*leon4*"(neighbor).　Those components were written clearly inside of the cross dotted lines square frame in proper positions.

In Conclusion of Category 3

The two subcategories in the category 3 are using the square frames as a teaching tool in order to show children how to write the character with accuracy of stroke patterns in their writing exercise books.　The square frames are the empty square with four equal sides which is similar as in the children's writing exercise books in the subcategory 3A.　The square frames are divided by a red cross of dotted lines to be used in the subcategory 3B.　The

special design square frame with the dotted line cross inside writing exercise books are usually provided to the non-Chinese speaking children as the character writing exercise books. The category 3 differs from the category 2 that the teachers use the similar square frame in the children's exercise books to demonstrate how to write the components and strokes to form characters. The follow category is to involve the children in participation in the character writing demonstrations on the whiteboard.

4.3.4   Category 4

Teaching character writing as providing the opportunities for children to

participate in the writing demonstrations on the whiteboard

The teachers involved the children in participation the teaching activities. The children participated in two ways in the teaching activities, group or individual. The purpose of this teaching approach is to enhance the children's interest in learning character writing. Category 4 has the following two subcategories.

4A   Teaching character writing as group participation in the character writing

demonstrations

(4A-1) teaching character writing as group participation in Chines Stroke Physical Exercise

The teacher led the group of children to do Chinese Stroke Physical Exercise in order to enhance how the children remember the directions of basic strokes to structure the characters.

(4A-1)

The picture (4A-1) illustrates a group of children standing in the front of the whiteboard to

follow their teacher doing Chinese Stroke Physical Exercise before they had character writing demonstrations in the classroom.   The children moved their arms or legs to represent the movement of the direction of the basic stroke.   There are six forms in Chinese Stroke Physical Exercise, such as a fist represents a dot, lift up one arm in the shoulder level and draw from left to right which represents a horizontal line, stretch up one arm over the head and draw from up to down which represents a vertical line, lift up one arm in the shoulder level and draw from left downwards to the right leg which represents left falling stroke, lift up one arm in the shoulder level and draw from right downwards to the left leg which represents right falling stroke, left leg stand still and right leg kicks toward the left leg which represents a hooked stroke.   The teacher used the physical exercise to involve the group of children in learning the direction of the basic strokes before she started the character writing demonstrations.   The following category is how the teacher involves the group of children to say the name of the strokes during her character writing demonstrations.

(4A-2) teaching character writing as group participation in saying the name of the strokes

When the teacher demonstrated how to write the character of 珍 "*zan*" (valuable) on the whiteboard, the children spoke out the name of the strokes.   It provided the opportunities for the teachers to know what the children know of the name of the basic strokes.   The teacher corrected the name of the basic strokes after she heard one of the children to name it wrongly.

Excerpt (4A-2)   *Teaching character:* 珍 *"zan1"(valuable)*

Teacher and children: Horizontal stroke, horizontal stroke, vertical stroke, rising stroke.

One of the children: The stroke goes upward.

Teacher: Right, draw this stroke towards up.

Teacher and children: Left falling stroke, right falling stroke.

Teacher: Who can tell me what is this component?

Some of children: The character of 人 "*jan4*"(human).
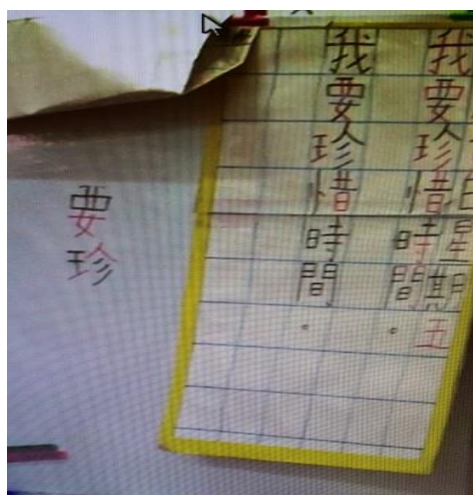
Teacher: Yes, it is. What's next?

One of the children: point, point, point.

Teacher: No, it is not point, point, point.

One of the children: Left falling stroke.

Teacher: Right! It is left falling stroke.　　How many?

Children: First left falling stroke, second left falling stroke, third left falling stroke. Three left falling

strokes

(4A-2)

The above excerpt and the picture (4A-2) illustrate how the teacher conducted the children to say the name of strokes while she demonstrated the character writing on the whiteboard. One of the children said the name of the three strokes to be three point strokes.　 The teacher responded to what the child said.　 After she denied what the former child said the stroke was named, as three point strokes, one of the children immediately answered the stroke to be named of "left falling stroke".　 The teacher replied the latter child's answer to be correct. It provided the opportunities for the children to use what they had known about the name of the basic strokes.　 The teacher corrected the children's mistakes when they confused the name of the basic strokes in the excerpt (4A-2).　 The (4A-2) subcategory differs from the

(4A-1) that the teacher wrote the characters on the whiteboard when the children spoke out the name of the strokes.   The following subcategory is the group of children participating in reading aloud the stroke sequence which is shown in the table (the pictures 4A 3.1 & 4A 3.2).

(4A-3) teaching character writing as reading aloud the name of the stroke sequence

Chinese character is like individual logographically symbol.   In order to help the learners to remember how to structure a character, traditionally learners are encouraged to follow the stroke sequence when they are handwriting a character.   In general in local preschools in Hong Kong, the teachers aim to indicate clearly the stroke sequence in teaching character writing.   They usually draw the strokes sequence in a vertical shape table.   During the teachers process of character handwriting demonstration on the whiteboard, they use different coloured pens to address each of the stroke pattern.   The two teaching steps of the stroke sequence are the table of the stroke sequence (4A-3.1) and the different coloured strokes of written characters inside the square frames (4A-3.2) as below.

4A-3.1
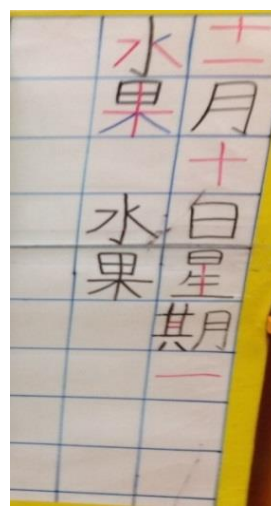
4A-3.2

Excerpt 4A-3.1   *Teaching characters:* 水果"*seoi 2gwo2*"(fruit)

Teacher: Let's look at the table of the stroke sequence (D1c-1), we say it together.

Teacher and children: Vertical stroke, a hooked stroke, horizontal stroke, left falling stroke, left falling

stroke and right falling stroke.

Teacher: This is the character of 水"*seoi2*" (water).

Teacher and children: Vertical stroke, horizontal stroke, vertical stroke, horizontal stroke, horizontal stroke, horizontal stroke, vertical stroke, vertical stroke, left falling stroke, right falling stroke.

Teacher: This is the character of 果"*gwo2*" (fruit)

In the picture of 4A-3.1 is the table of the stroke sequence and the picture of 4A-3.2 is the different coloured writing strokes for forming the written characters inside the square frames. The above excerpt illustrates the teacher using two steps of 'look and say' method to teach the character writing on the whiteboard. The table of the writing stroke sequence order was hung on the whiteboard; the first step was the children to follow the teacher to verbalizing the basic strokes with "imagine writing" in the air (口唱書空) with a finger as well. Then the teacher wrote the characters with different coloured pens inside the square frames on the whiteboard as the second step. At the same time the children spoke the name of the basic strokes again. The subcategory 4A differs from the 4A-1 and 4A-2 in that the children repeated the name of basic strokes while they engaged with the table of stroke sequence.

In summary, the subcategory 4A aims to involve the group of children in the character writing activity. The teacher taught the children to review the names of the basic strokes with the Chinese Stroke Physical Exercise before starting her character writing demonstrations in the picture (4A-1). While the teacher processed her writing demonstrations, the children said the names of the writing strokes. The teacher corrected the children's mistakes when they confused the names of the writing strokes in the excerpt (4A-2). The teacher used the table of basic stroke sequence orders and the two steps of 'Look and Say' method to involve the children in participation in the character writing demonstrations on the whiteboard in the excerpt (4A-3.1). The following subcategory differs from the subcategory 4A in that the teachers selected one child from the group to participate in the character writing activity on

the whiteboard.

4B Teaching character writing as individual child participation in the teaching activities on the whiteboard

After teaching character writing demonstrations, the teacher would play the game in relation to the written characters.   The children would lift up their hands in order to be selected by the teachers.

picture 4B

The   picture 4B   illustrates how a non-Chinese speaking child wrote the three characters of 動物園*"dung1 mat6 jyun4"* (zoo). After that, the teacher asked the class to clap their hands and praised the non-Chinese speaking child. That child went back to his seat and then the teacher pointed out that he made two mistakes of the writing stroke sequence orders. The teacher then showed the children how to write correct stroke sequence of the characters, and then she asked the NCS child to come to the front to write the two characters again on the whiteboard. Finally the NCS child could write the characters with the correct stroke sequence, the teacher praised him before he returned to his seat.

The above excerpt illustrates how the teacher facilitated the children's learning of characters writing with the correct stroke sequence in the class activity.   It provides the opportunities for the teachers to correct mistakes from the children's handwriting so that the teachers address the children about how to avoid making these mistakes in their handwriting.   The

subcategory 4B differs from the subcategory 4A in that the teachers selected one of the children to participate in the handwriting activity on the whiteboard.

In Conclusion of Category 4

The two subcategories in the category 4 were to involve the children either in a group or individually in participation in the activities of the character writing demonstrations.

4.4   Descriptions of Lived Object of Learning

Introduction

The following account describes the result of the data analysis in relation to the third research question of this study:

> What are the preschool NCS children able to perform after the teaching
>
> of their Chinese teachers in the class?

The result of the data analysis is as follows:

The data collected from observations, video- and audio recordings, field notes, writing artifacts, photographic documentation and interview.   Three types of conception were identified from the NCS children in character writing.

The categories of description and outcomes spaces

The characteristics of the three conceptions of learning character writing are as follows:

4.4.1   Category 1

Learning character writing as being able to connect with their classroom experience

The NCS children associated the meaning of characters with their classroom experiences.

4.4.2   Category 2

Learning character writing as completing the task assigned by the teachers

The NCS children copied the shape of the characters completely and followed the pattern of the writing format.   They presented their exercise books to their teachers after they finished their written characters.   Hence, their character writing focused on the shape of characters because they followed what their teachers focused on.

4.4.3   Category 3

Learning character writing as being integrated into an identity group

The NCS children showed their same ability through attending the same activities as their native Chinese speaking classmates.   The NCS children would like to integrate into the identity group who spoke differently with them.

Figure 9 "Three conceptions of Character Writing (Lived Object of Learning)" was shown on the following page.   These categories will be elaborated in the succeeding sections

Figure 9

Category 1:
Learning character writing as being able to connect with their classroom experience

1A The pronunciations of character symbols are associated with the class activities.

1B The pronunciations of the characters are associated with their teacher's body actions in their daily lessons.

1C The pronunciations of the characters are associated with their familiar concrete objects

1D The meaning of written characters is associated with their familiar English vocabularies

Category 2:
Learning character writing as completing the task assigned by the teachers

2A Imitating the shape of the characters from the whiteboard in their own exercise books:
(1) the character is constructed by two components
(2) the shape of the component
(3) the shape of the writing strokes
(4) the table of order writing stroke
(5) the direction of writing strokes

2B Respond to their character writing:
(1) responding to their everyday character writing in their exercise books
(2) try to tell how to write his written characters
(3) tell why they follow the character written pattern

Category 3:
Learning character writing as being integrated into an identity group.

3(1) be the same ability to decompose the structure of the character
3(2) following the writing stroke sequence order in their written characters
3(3) the same opportunity of participation in whiteboard activity in front of the group

4.4.1 Category 1

Learning character writing as being able to connect with their classroom experience

The NCS children were able to communicate with their teachers and native Chinese classmates in Cantonese in their classroom experience.   The following subcategories in Category A are what the NCS children saw, the phonemes and the meanings of the character symbols in their classroom environment.

Category A has the following four subcategories.

1A The pronunciations of character symbols are associated with the class activities.

(C_ 20150316 in field notes)

The following two illustrations are related to the character symbols seen in the classroom by the NCS children in the routine class experience.

1A-1   1A-2

There were two posters (pictures1A-1 & 1A-2) on the wall in the classroom, one poster was written 分組表"*fan1 zou2 biu2*" (Group List Board) in the picture 1A-1, another was written 晴雨表 "*cing4 jyu6 biu2*" (Weather Board) in the picture 1A2.   The children were required to put a sign on the group list table before they attended their activities in the revolving time every day.   When the NCS child was requested to read aloud the characters of 分組表 (Group List Board) to be sounded "*fan 1zou2 biu2*", the NCS child pronounced the characters in "*zyun2 paai4*" which meant turn over the card.   It reflects the NCS child to understand her teacher's class instruction so she connected the meaning to the phonemes of

the characters. Another similar example is found in the routine class activity, the teacher taught the children to read aloud the date and the weather with the weather table every day. When the NCS children were requested to pronounce the characters 晴雨表"*cing4jyu6biu2*" which means "Weather Board", the NCS child said "*jat6 kei4 biu2*" which means "Date Board". The NCS child told the researcher the numbers in the table to represent the date. It shows that the NCS child associates the function of the table to be the phonemes of the characters. The subcategory 1A is when the NCS children learn the meanings and phonemes of the characters through their classroom experiences. The next subcategory is when the NCS children learnt the characters through the teacher's postures in the guided writing time.

1B The pronunciations of the characters are associated with their teacher's body actions in their daily lessons.

(B_021115O in field notes)

The following illustration is related to how the NCS child learnt the pronunciation of the characters from the character writing demonstrations. After the NCS child finished his written characters, he pronounced the characters which he wrote it in his exercise book (picture 1B-1).

1B-1

After the NCS child was asked by the researcher to pronounce his written characters. The NCS child said 訓覺 "*fan3 gaau3*" (sleeping). Although the NCS child did not correctly pronounce his written characters, his pronunciation represented the same meaning of the characters which he wrote. When the NCS child was in the character writing demonstration time, her teacher presented a posture of sleeping in order to explain the meaning of the written characters of 休息"*jau1 sik1*" (rest) on the whiteboard. It reflects the NCS child recalling the teacher's posture and associating this with the pronunciation of his written characters. The subcategory 1B is when the NCS children associate the written characters with their teacher's body actions or postures in their daily learning lessons. The next subcategory is when the NCS children connect the characters with the concrete objects.

1C The pronunciations of the characters are associated with their familiar concrete objects

(D_031215E)

The following illustration is related to the NCS child individually participating in activity in front of the class. She demonstrated how to choose a concrete object from the vegetable baskets to match the printed characters.

1C

After the teacher taught a rhyme of vegetable soup, she selected one of the children to read the character recognition cards with the different names of vegetables on the whiteboard. When the NCS child participated to the activity, she pointed to one of the character recognition cards on the whiteboard in picture 1C. There were two characters 蘿蔔 on the

character recognition card so it had two syllables which should be pronounced *"lo4 baak6"* (carrot).   The NCS child said 紅蘿蔔 *"hung4 lo4 baak6"* (red carrot) in three syllables which her teacher and her native Chinese speaking classmates used to name this kind of vegetable in their daily lives.   However her pronunciation with three syllables did not match the two characters on the character recognition card.   Then the NCS child accurately picked up the plastic model of carrot from the vegetable basket.   It reflects how the NCS child pronounced the two characters to associate with a concrete object.   The subcategory 1C is the NCS children learn the phonemes of characters to connect with the name of the concrete objects through her classroom experience.   The next subcategory is the NCS children learn the characters through their familiar English vocabularies.

1DThe meaning of written characters is associated with their familiar English vocabulary

C_241115

The following illustration is related to the NCS child's response to his Chinese teacher while the teacher was explaining the meaning of characters of elephant during the character writing demonstration time.

1D

When the teacher explained the meaning of the character with her posture and asked

the children what an elephant looked like (picture 1D).   The NCS child saw his

teacher to imitate the posture of elephant and he spoke out loudly **"elephant"** in

English.   It reflects the NCS child's use of English in associating with the meaning

of the characters in their daily lessons.

In summary, Category 1 is related to the NCS children using their classroom experience to connect with their character recognition skills in the class. The way the NCS children connect with characters in learning character recognition can be divided into four subcategories. The subcategory 1A is the NCS children associate the classroom characters with their daily routine class activities. The subcategory 1B is the NCS children associate the characters with their teacher's body actions in their daily lessons. The subcategory 1C is the NCS children associate the characters with the names of familiar concrete objects which they heard them in their classroom experiences. The subcategory 1D is when the NCS children connect the characters with their familiar English vocabularies.

In Conclusion of Category 1

It is related to the NCS children learning the pronunciations and the meaning of the characters to associate with their classroom experience. The Category 1 is when the characters can be seen so the NCS children associated the meanings or phonemes of the characters with their classroom experience. The next category is related to the NCS children progressing to replicate the characters from the whiteboard in their exercise books.

4.4.2   Category 2

Learning character writing as completing the task assigned by the teachers

After the NCS children had engaged in the character writing demonstration time, they would copy the characters from the whiteboard to their exercise books. The learning excerpts show how the NCS children see their teacher's teaching in character writing.
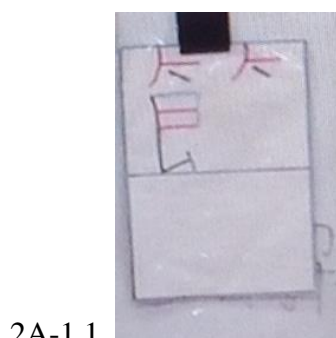
Category 2 has the following two subcategories.

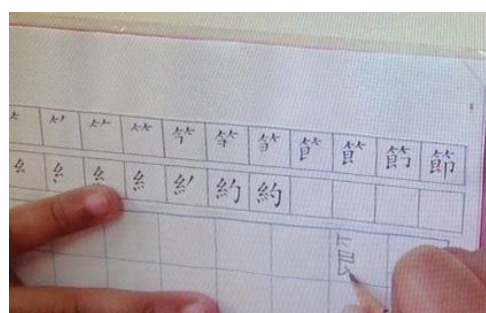***2A Imitate the shape of the characters from the whiteboard to their own exercise books.***

C180316

The following five illustrations from 2A-1to 2A-5 are related to what the NCS children saw during their teacher's character writing demonstration.

(2A-1) the two components form the shape of the character

2A-1.1

2A-1.2

The structure of the character of 節 "*zit3*" (save) is constructed by two components which are the upper and lower parts of the character.   The teacher instructed her character writing in the upper part of the character first, and then she wrote the left hand side of the lower part on the whiteboard (Picture 2A-1.1).   When the NCS child wrote the character of 節 "*zit3*" (save) in her exercise book, she started from the left hand side (picture2A-1.2) first and then she wrote the right hand side.   When the NCS child showed her written characters to her teacher, she still achieved to write the same shape as her teacher's written character.   Her character writing reflects what she saw her teacher's character writing. The next illustration is the NCS child to be malformed the component to write the character.

(2B-1) the sharp of the component

2B-1
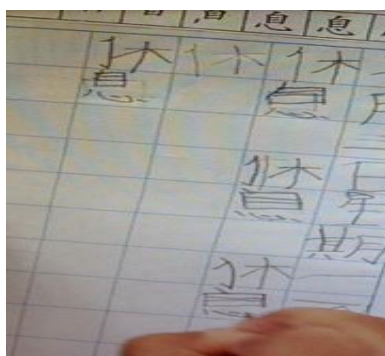
C031115

The written characters in the picture (2B-1) are the character of 休息 " *jau1sik1*" (rest). When the teacher demonstrated the first character of 休"*jau1*"(rest), she told the children about the left part of the character which was a component that was original from the character of 人"*jan4*" (human). When the NCS child proceeded the character writing of the component in the character of 休"*jau1*" (rest), she wrote a tick by the end of the straight line of the component of 人"*jan4*"(human). Although the teacher told the children that the left part of the character which was to connect with the character of "人" "*jan4*" (human), the NCS child did not associate the component with the character of "人" "*jan4*"(human). She added a tick at the bottom of the straight line of the left part of the character which is shown in the picture (2B-1). It shows the NCS child did not understand the relationship between the components and the characters although the teacher instructed them about this character previously. The following illustrations are related to how the NCS children write the same shape of characters without following their teacher's instructions.

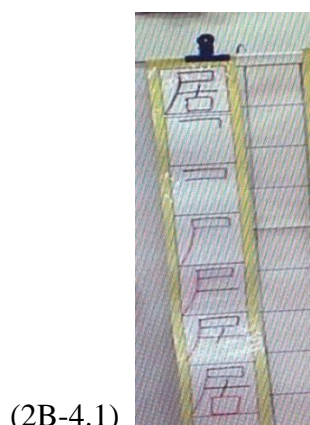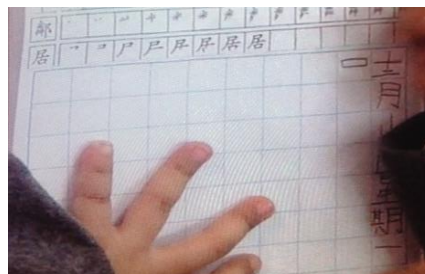(2B-3) the shape of the writing strokes
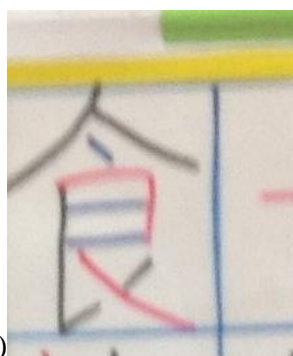
(2B-3.1)

(2B-3.2)

During the time of character writing demonstration, the teachers demonstrated each stroke to form the grapheme of a character with different colour pens. It purposed the children to pay attention to the shape of each writing stroke. The colourful written character by the teacher is the character of 食 "*sik6*" (eat)which is shown in the picture (2B-3.1). The NCS child wrote the character of eat 食 in his exercise book, he proceeded to write the shape of 曰 in the middle of the character. It reflects the NCS child what he saw the grapheme of the character through his written characters. The next illustration is how the NCS children see the table of writing stroke sequence order to form the graphemes of characters in their written characters. Beside the colourful characters to be displayed on the whiteboard, the teachers usually instructed the children on how important it is to follow the order of stroke in proceeding to write characters. The table of stroke order displays each step of stroke to form the shape of characters on the whiteboard. It purposes to help the children to see the graphemes of each stroke clearly in proceeding of the written characters.

(2B-4) the table of stroke sequence

(2B-4.1)

(2B-4.2)

The table of writing stroke sequence order was the character of 居"*geoi1*" (live) on the whiteboard (2B-4.1) and the paper strip of writing stroke sequence was in the children's exercise books (2B-4.2).　The procedure of the writing stroke is from the top to the bottom on the table of writing stroke order (2B-4.1).　The teacher used the red pen to draw red falling strokes of 尸 which is shown inside the fourth square frame of the table.　However the NCS child proceeded to write the character of 口 "*hau2*" (mouth)instead of drawing the red falling stroke of 尸 in her exercise book(2B-4.2).　It reflects the NCS child focuses on imitating the grapheme of the character rather than the need of using the table of writing stroke sequence order to form the grapheme of character in her written character.　She purposed to complete her writing task so that she could show her written characters to her teacher.　The next illustration is how the NCS child reacts the teacher's instruction of writing strokes.

(2B-5) the direction of writing strokes

2B-5.1

2B-5.2

C271114

The teacher told the children how to draw the direction of the stroke to process the character of 物 "mat1" (thing). The teacher asked the children to pay attention especially to how she drew the stroke upwards from the left towards the right with the red pen (2B-5.1). The NCS child proceeded to write the character of thing 物 "mat" (thing). He drew the stroke downwards from right to left (2B-5.2) that the stroke direction is different from his teacher's demonstration. It reflects the importance of the NCS child focusing on imitating the same shape of the character in order to let the teacher check his writing. After the NCS child had his written characters checked by the teacher, he could start to attend other activities in the class.

In summary, the above five illustrations are in the subcategory 2B in relation the NCS children learning how to proceed with writing characters to reveal what they saw about their character writing when they duplicated the characters from the whiteboard to their exercise books. The first two illustrations relate to the broken stroke sequence to compose the components and the other three illustrations relate to the writing strokes. The components and the strokes are used to form the shape of characters. The NCS children imitated completely the same shape of the characters from the whiteboard in their exercise books

however they did not follow what the teacher instructed them to do about the stroke sequence. They purposed to complete their writing tasks so that they could show their character writing to the teachers. The teachers focused on checking the shape of the characters to see that it causes the NCS children to focus on what their teachers focused on in their character writing. The next subcategory relates to the NCS children imitating the pronunciations of the characters from what they heard from the teacher or the native Chinese speaking children.

2C Respond to their character writing

The following three illustrations are related to how the NCS children to respond their character writing in their exercise books.

(2C-1) respond their everyday character writing in their exercise books
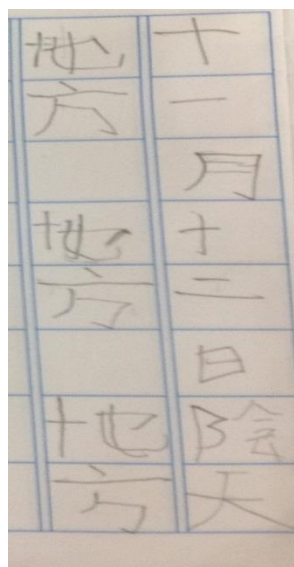
(2C-1)

(sample from code A121115M)

The teachers used to illustrate the date and the weather of characters on the first column of the written format on the whiteboard. After the NCS child finished his written characters, he was requested by the researcher to read aloud the characters on the first column(picture 2C-1). He was able to pronounce accurately the characters of the date and the weather. The researcher asked him what the meaning of the characters of 陰天 "*jam1 tin1*" (cloudy).

The NCS child just replied using the replicated sentence copied from the teacher as said before. The NCS child said "Today is cloudy". He is not able to explain the meaning of the characters of 陰天 "*jam1 tin1*" (cloudy) to the researcher. The researcher asked him why he wrote the characters of the date and the weather in his exercise book. He replied that the teacher asked the class children to do so. It reflects how the NCS child responds to his learning of written characters as a task to be assigned by the teacher. The following illustration is related to the NCS child to imitate the sentence that he heard from the native Chinese children to explain how he structured his written characters.

(2C-2) try to tell how to write his written characters
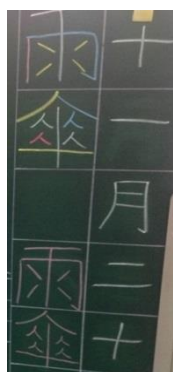
(2C-2.1)   (2C-2.1)

(A261115J)

After the NCS child finished copying the character of 傘"*saan3*" (umbrella) from the whiteboard (2C-2.1) into his exercise book (2C-2.2). The NCS child was asked by the researcher to tell how could write the character of umbrella, he replied it was taught by the teacher. The NCS child said: "Ms X taught me.". The researcher asked the NCS child to tell how the teacher taught them. The NCS child said: "1,2,3,4.". The sentence the NCS child said was replicated from what the native Chinese children responded to the teacher when they engaged in the character writing demonstration time. While the teacher was

discussing with the children of the character of 傘"*saan3*" (umbrella), she asked the children to count how many shapes of 人"*jan4*" within the character of 傘"*saan3*" (umbrella). So the children counted the shapes of 人"*jan4*" (human) within the characters. The reply from the NCS child was taken from the sentence that he heard from the native Chinese speaking children in response to their teacher. Then the researcher asked the NCS child to write the character of umbrella again on his exercise book in order to make the NCS child to review his written character. When the NCS child proceeded with his character writing, one of his classmates asked him why he wrote the characters more than the teacher asked. The NCS child replied to his classmate that he wrote it for the researcher. The researcher asked the child why he needed to write characters in his exercise book every day. The NCS child replied that it was because the teacher asked them to do so. The next illustration is how the NCS children respond to why they had to follow the written pattern in their exercise books.

(2C-3) tell why they follow the character written pattern

(2C-3.1)   (2C-3.2)
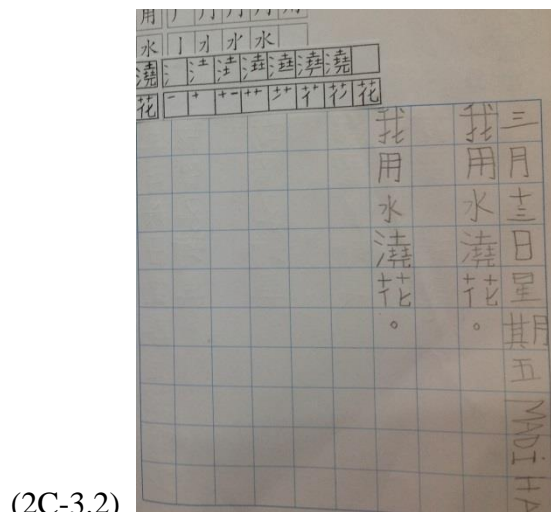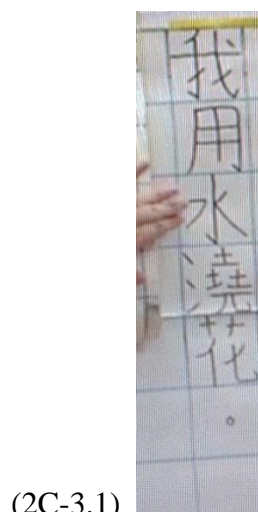
The picture (2C-3.1) showed what the teacher demonstrated on the whiteboard of the pattern of the written characters to be placed in the children's exercise books. The picture (2C-3.2) showed one of the NCS children replicated the written pattern of one character for one square

frame and the full stop symbol for the last square frame in her exercise book. When the researcher asked the NCS child why he need to write one character for one square frame. The NCS child answered that the teacher asked them to do so. It reflects the NCS children focus on what the teacher asked them to do with their written characters.

In summary, the three illustrations in the subcategory 2B are related to what the NCS children responded to in their learning written characters. The children used to write the characters of the weather every day. The NCS child associated his learning written characters with a task so that he just followed his teacher's demonstration. The NCS child expressed that his written characters had to follow his teacher's instruction. For this reason, they had to follow the written pattern of the one character for one square frame in their exercise books. When the NCS children duplicated their written characters, they only imitated the graphemes of the characters. They followed the teacher's instructions in order to complete the task assigned by the teacher.

In Conclusion of Category 2

This is related to the NCS children learning character writing through imitation which are shown in the subcategory 2B. They focused on imitating the graphemes of the characters exactly as the teacher's written characters on the whiteboard. It is because their teacher focused on checking the graphemes of the written characters. Hence the NCS children see their learning of written characters as to complete the task assigned by the teacher. The category 2 is to reveal how the NCS children imitated their teachers and their native Chinese speaking children to count the number of the strokes in the subcategory 2B. The NCS children focused on the graphemes of the characters and imitated the spoken sentence by their teachers who used to instruct them because they connected their learning of written characters with the task assigned by the teachers. The next category is related to the NCS

children learning of written characters to participate in different literacy activities.

4.4.3   Category 3

Learning character writing as being integrated into identity group

The NCS children integrated into the class activities the same as the native Chinese speaking children so that they actively participated in group or individual learning character writing activities in the classroom.   The following three illustrations are related to how the NCS children participated in the class activities the same as the native Chinese children.

3(1)   being to have the same ability to decompose the structure of the character
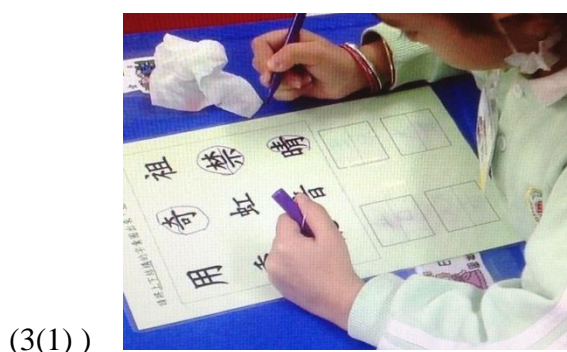
(3(1))

D051215

The NCS child played with the card game which aimed to promote character learning about how to justify the character structures during the class free play time in the picture (3A). She was able to try independently to decompose the structure of the characters.   Though the NCS child was not able to define accurately each character in the exact type of the character structure, she could circle two of four characters correctly as the type of the character structure.   Her teacher praised what she circled correctly after she finished the card game. The card game was placed in the open shelf so that the children could play many times as

they wanted.   The NCS child willingly participated in a similar game to the native Chinese speaking children in the class.   It reflects the NCS child to be able to decompose the structure of the characters as same as her native Chinese speaking classmates.   The next illustration is related to how the NCS child replicates the written characters from the whiteboard to her exercise book.

3(2)   being to follow the writing stroke sequence order in her written characters
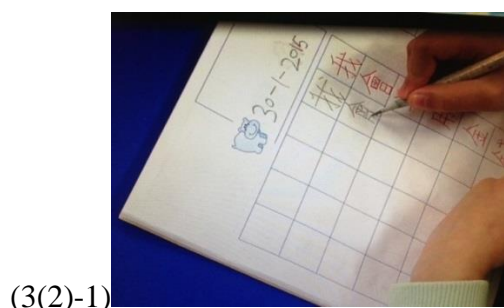
(3(2)-1)   (3(2)-2)

The NCS child wrote six characters "1st 我"*ngo5*" (I) / 2nd 會 "*kui5*"(will) / 3rd 善"*sin6*" (wisely) / 4th 用"*jung6*"(using) / 5th 金 "*gam1*"(golden) / 6th 錢"*cin4*"(money)"in her exercise book in the picture (3(2)-1) and each character was formed by at least five or more than sixteen strokes.   The character with less strokes is the fourth one and the sixth character has most strokes in this group of written characters.   The NCS child proceeded to write the six written characters in her exercise book to be similar to the teacher demonstrated character writing on the whiteboard.   She wrote each stroke's order and direction to follow her teacher's instruction.   After she finished her written characters, the researcher asked her to explain how she could write the group of characters.   The NCS child imitated her teacher how to give instructions to draw the writing strokes on the whiteboard.   It reflects the NCS child to pay attention to her teacher's demonstrations on the whiteboard in order to write the same as her teacher's written characters on her exercise book.   The NCS child noticed the

character writing instructions to connect with her written characters so she could write the same characters as her teacher. She was keen on to make the same things as her teacher and her native Chinese speaking classmates because she liked to play with them. The next illustration is related to how the NCS children participate in the whiteboard character writing demonstrations in front of their groups as being as the same opportunity of participation of her classmates.

3(3)   being to have the same opportunity of participation in whiteboard activity in front of the group

(3(3)-1)   (3(3)-2)

The NCS children enjoyed being the same as their native Chinese speaking classmates to participate individually into the whiteboard activity in front of the group in the pictures (3(3)-1) and (3(3)-2). The NCS child raised their hands the same as the other children because they knew they have the same opportunity to be called by the teacher (3(3)-1). The NCS child was chosen to perform his character writing on the whiteboard in front of the group. Although he was corrected by his teacher for minor mistakes in his written characters in front of his classmates, he was treated just the same as the other native Chinese speaking classmates when they made mistakes in their written characters. Finally the teacher asked the children to clap their hands for the child who came to perform his character

writing on the whiteboard. The NCS child gained the same praise and claps from the teacher and classmates. His face showed contented smile. It reflects the NCS children enjoy being treated the same as their native Chinese speaking classmates when they integrated into the group who spoke differently with them.

In Conclusion of Category 3

The three illustrations in category 3 are related to how the NCS children integrated into the group who spoke differently with them. They showed their same ability, same written characters as their teacher and same opportunity as their classmates because they enjoy being integrated into the identity group.

4.5   Summary

The findings answering the first and second research questions are related to the teacher participants in this study.   The aim of the first research question was to understand what the teachers' thoughts on teaching Chinese character writings in local preschools.   The data collected include these from individual interviews using semi-structured questions, the lesson plans and field notes.

The aim of the second research question was to understand how the teachers implemented their character writing activities in the classroom.   The data collected include video and audio recordings of the teaching character writing activities, classroom observations, field notes, collection of the artefacts and photographic documentations.   The findings reveal that there was consistency between their thoughts on teaching character writings and their implementation of their Chinese character writing activities in the classes.

The difference between the first research question and the second research question is that the former focused on what the teachers wanted to do and the second what they actually did in the teaching activities.   The data that were used to answer the second research question also reveal what the NCS children were taught in these activities.

The aim of the third research question was to understand the NCS children's behavior performed after their teachers implemented the character writing activities in the classroom. The data collected include video and audio recordings of the teaching character writing activities, classroom observations, field notes, collection of the artifacts, photographic documentations and individual interviews using semi-structured questions.

This study can therefore provide evidence regarding how the actual teaching activities affected how the NCS children learned character writing.   Some related problems and the solutions could also be discovered and discussed in the following chapter.

Chapter 5: Discussion

5.1 Introduction

The aims of the present research are to investigate the teaching of NCS preschool children in learning character recognition in local preschools. As mentioned in the Introduction, past studies have found that NCS students have low attainment in learning Chinese language, which negatively affects their overall academic attainment (Loper, 2004; Ku, 2005; Carmichael, 2009; Lisenby, 2011). It has also been found that NCS students are more likely to encounter difficulties in reading and writing Chinese, among the various skills. Therefore, it is hoped that the findings of the present study will enhance educational practitioners' understanding of the experience of NCS children in learning Chinese characters in local preschools, and that ultimately the difficulties faced by these children and their teachers in terms of the teaching and learning of Chinese characters may be dealt with.

This chapter on the discussion of the findings of the present study is based on the conceptual framework of the three parts in learning situations as suggested by Marton & Tsui (2004), namely the intended object of learning, the enacted object of learning and the lived object of learning. Based on these three parts, three research questions will be answered accordingly, and they are: (1) What do the teachers intend to teach? ; (2) What do the teachers enact in their teaching in the classrooms? and (3) What do the NCS preschool children actually learn from the teaching of the teachers?

This discussion chapter will begin with the findings of the teachers' and the NCS preschool children's conception of character writing. Then excerpts of data related to the lived object of learning will be discussed. This is where the NCS children's character writing performances will be shown, especially those that were different from the teaching of their

teachers. The discussion of the NCS children's discernment is based on the explanatory framework "A Way of Experiencing Something" (see Figure 6 in pp.163) from Learning & Awareness (Marton & Booth, 1997). This chapter will conclude with the relationship between students' writings, based on their perceptual skills of character's structure, and their teacher's verbal instructions. Various Chinese character teaching approaches will be explored and practical teaching strategies and techniques suggested.

5.2 The Conceptions of Character Writing

The following section will discuss of the findings of the three parts of research questions along with the literature reviews. These categories are logically related to each other; in the sense that the result reflects that people obtain their experience from the same phenomenon (Marton, 1994). In addition, these categories are representing the people's conceptions. The term 'conception' is the unit of the findings of phenomenographic studies and it is presented as logically and hierarchically organized (Marton & Booth, 1997).

5.2.1 Compare the Teachers Conceptions of Character Writing (Intended object of learning) and the Curriculum Guideline

The findings of the Intended Object of Learning are based on the participating teachers' lesson plans and the semi-structured face-to-face interviews with them. The five teaching principals are written in the preschool curriculum guideline (EdB, 2006) to be used to shed light on the teachers' conceptions. The following Table (6) Comparison between the curriculum guideline and Intended object of learning in the present research.

Table 6
Comparison Between the Curriculum Guideline
and Intended Object of Learning in the Present Research

Guide to the Pre-primary Curriculum (EdB, 2006)	Teacher's conceptions of character writing (Intended object of learning)
Teachers may make use of words in everyday life contexts	as teaching children to use characters in daily lives
Teachers should guide children to pay attention to characters/words, especially their structure	as teaching children to understand the structure of characters
Teachers should cultivate children's interest	as fostering children's interest in writing characters
Teachers should encourage children to build up their self-confidence by providing them with opportunities to share their writing with others.	as helping children to build self-confidence
Teachers should not force children to write with pencils/pens if they are not ready.	as promoting Chinese culture

On the whole, the teachers' five conceptions are close to the curriculum guideline in teaching character writing (Education Bureau, 2006). Except the last point in Table (6), the teachers did not mention the readiness in character writing. It could be the children the participants in the present research taught were in the upper level class. The teachers presumed that they could master the pencils well in character writing. The findings of the teachers' intentions

reflect the five kinds of teachers' conception in relation to their theoretical knowledge from their training.

As mentioned at the beginning of this chapter, people's conceptions are hierarchically organized, it means the first concept is in the lowest level and the fifth concept is the highest level. The following Figure (10) shows the five conceptions of character writing (the object of learning) integrated into the perspective of sociolinguistics. Grosjean (1982) states the functions of language. It is not just an instrument of communication; it is also a symbol of social or group identity.

Figure (10) The Five Teachers' Conception of Character Writing is to Integrate the Functions of Language into a Sociolinguistic Perspective
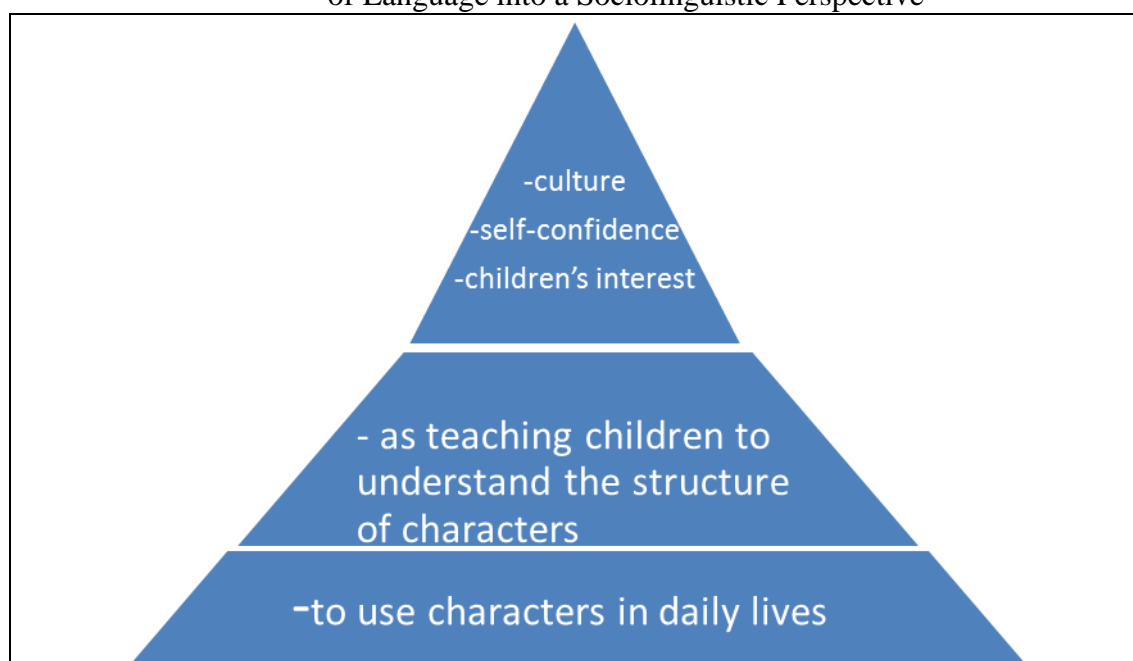
The foundation level is character writing to relate to the use of character in the daily lives. The middle level is the concrete knowledge of the language. The highest levels are the abstract perspectives in the lives, such as interest, self-confidence and promoting Chinese culture. The teachers' intentions of the five conceptions of character writing are integrated into the three levels which are consistent with the perspective of sociolinguistics.

5.2.2 Compare Teacher's Enactment (Enacted Object of Learning) and their intentions

The findings of the Enacted Object of Learning are based on classroom observations when the teachers implemented their teaching activities to the children in their classrooms. The teachers' four conceptions of character writing are related to their lesson enactment. It reflects what they actually do in the teaching activities in the classroom. The following Table (7) Comparison between the two findings of 'Object of Learning' about character writing

Table (7)

Teacher's five conceptions of character writing (Intended Object of Learning)	Teacher's four conceptions of character writing (Enacted Object of Learning)
as teaching children to use characters in daily lives	as providing a meaningful context for children to connect with their classroom experience
as teaching children to understand the structure of characters	as analyzing the structure of written characters;
	as demonstrating how to write a character inside a square frame
as fostering children's interest in writing characters	as providing the opportunities for children to participate in the writing demonstrations on the whiteboard
as helping children to build self-confidence	
as promoting Chinese culture	

Compared with their intentions of the five conceptions, the teachers were found generally to

practice what they mentioned in the interview.   It means the teachers' enactment is close to the Guide to the Pre-primary Curriculum (EdB, 2006).   They could use a meaningful context to teach character writing and conduct how to structure characters in the character writing demonstration on the whiteboard.   The teachers used the square frame as part of the teaching tools to demonstrate character writing.   The fourth conception is to provide the opportunities for children to participate in the writing demonstrations on the whiteboard.   The teachers said in the interview why they had children participating in the teaching character writing activities.   They thought children could be attracted to learning character writing or enjoy writing characters with different activities.   The fourth conception is in relation to cultivating children's interest in character writing and to build up their self-confidence.   On the whole, the teachers' four kinds of conceptions are close to their intentions.

5.2.3   Children's Conceptions of Character Writing (Lived Object of Learning) and the Conceptions of Learning

As for Lived Object of Learning, analyses are based on classroom observations of the performances of the NCS children after they experienced their teacher's activities and the interviews of the NCS children.   Three kinds of conception of learning character writing were identified when describing Lived Object of Learning, including (1) learning character writing as being able to connect with their classroom experience; (2) learning character writing as completing the task assigned by the teachers; (3) learning character writing as being integrated into an identity group.   The NCS children's three conceptions of character writing are hierarchically organized.   The following is Table (8) Comparison between the findings in the present research and preschool children's conceptions of learning from Pramling (1983).

Table (8) Comparison Between Preschool Children's Conceptions of Learning from Pramling and Findings in the Present Research

Levels of developmental thinking	The children's conceptions of learning (Pramling,1983)	The three NCS children's conceptions of learning character writing (Lived Object of Learning)
Lowest	to do something.	Category (1) as being able to connect with their classroom experience.
Middle	to know something	Category (2) as completing the task assigned by the teachers.
Highest	to understand (as same as adult)	Category (3) as being integrated into an identity group.

The NCS children's conceptions of character writing were identified at three levels in the present research. The lowest level is to try to understand the meaning of it. The middle level is to cooperate with the teacher's instructions. The highest level is to integrate into the community language group. With Pramling (1983), the three levels of children's conceptions of learning are related to the development of children's thinking. Piaget (as cited in Pramling 1983) describes the developmental stages of thinking as from concrete doing towards abstract symbolization. The highest level of the NCS preschool children's conception of character writing is to relate the language to the people's identity. Pramling (1983) states that the highest level of the children's conception of learning is to be as same as adult. The NCS preschool children learn Chinese as a second language. The past two

studies (Shum et al., 2011; Lai et al., 2015) were the language and their identity. Shum et al., (2011) & Lai et al., (2015) conducted a survey on the NCS secondary students who studied in the 'Designated Schools' in learning Chinese in Hong Kong. They point out that the NCS senior secondary school children were affected by their cultural identity such that it caused them not to be self-confident in learning Chinese in their school lives. The highest level of the NCS preschool children's conception of character writing is consistent with the NCS senior secondary school students' ability to relate the learning of Chinese to their identity group. As Thompson (1995) describes in the book "Bilingual Children Entering Preschool Education", he points out language and ethnic identity are related reciprocally, language use influences the formation of ethnic identity. The findings show that the NCS children have to form their ethnic identity as early as in the preschool education.

5.3 Significant and Contributions

The findings of the present research contribute to the better understanding of effective teaching approaches in character writing in local preschools. The areas of contributions include the significance of the orthographic awareness and teaching approaches in relation to character recognition.

5.3.1 The NCS Children's Learning Character Writing Experience

Phenomenographic research aims to explore the range of meanings within a sample group and each individual within the group. This means that no one's experience can be understood in isolation from the others. Everyone's experience, is interpreted within the context of the group of transcripts or meanings as a whole, in terms of similarities to and differences in the phenomenon (Akerlind et al., 2005) .

The following learning excerpts are taken from the third part of the findings "Lived Object of Learning" in relation to the conception of Categories 2 (pp.139-148) which is learning character writing as completing the task assigned by the teachers. It means this type of conception of the NCS children is to think that the meaning of character writing is to be like an assigned duty.

After the NCS children were taught the stroke sequence to compose their handwritings by the teachers, they had to write the taught characters a few times in their exercise books. The learning excerpt was identified to show one participating NCS child doing her handwriting of the character of 節 *"zit3"* (save) (Picture a) to show her handwriting in processing the different way with her teacher's demonstration.
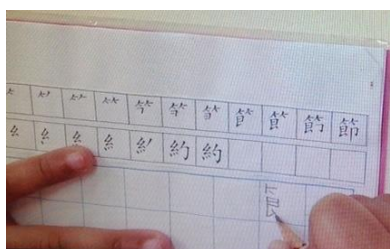
(a) Child X   (b) Teacher A
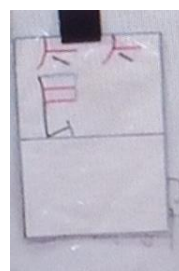
The NCS children, namely Child X, copied the character of 節*"zit3"*(save) from the whiteboard, which was placed in front of the class, to her exercise book. One interesting thing about the NCS Child X's writing sequence is that she composed the strokes on the left part first and then she wrote the right part (Picture a). However her teacher, Teacher A, actually demonstrated the correct stroke sequence, which was to complete the upper part first, before the bottom part was written (Picture b). When Teacher A taught the stroke sequence of this character, the two components (upper and bottom) were revealed one after the other; the upper part of the component was shown first and then the bottom part.

In this case, the Child X's character writing experience is interpreted within the context of the meaning in the phenomenographic research. The framework of the following

discussion, regarding her handwriting and discernment, is based on the

"A Way of Experiencing Something" proposed by (Marton & Booth, 1997) (see Figure 6)

EXPERIENCE

structural aspect   referential aspect

external horizon   internal horizon
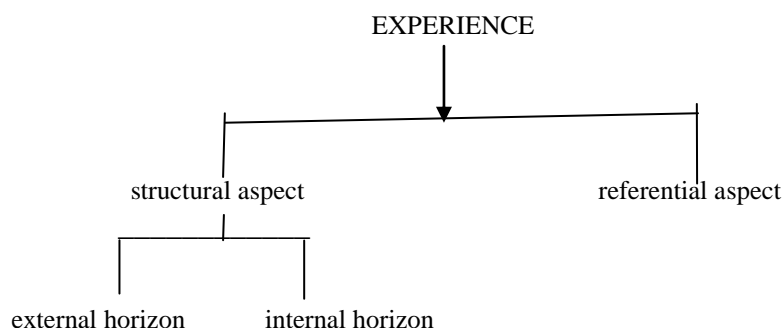
Based on the evidence that illustrates the Child X's experience during their handwritings, it is obvious that how the teacher taught affected what the NCS children actually learned, and some revealing cases will be discussed below.

Teacher A instructed the children to use stroke sequence to compose the character in her teaching, showing her intention to teach the children the structure of the two components through stroke sequence (Picture b). Although the NCS Child X was taught the stroke sequence in the writing demonstration, her discernment, her decomposition of characters into components, shows her understanding the teacher's demonstration.

Marton & Booth's (1997) "A Way of Experiencing Something" can be applied to demonstrate the NCS child X's learning experience (see Figure 6 again). The referential aspect would be the final conclusion of the NCS Child X on what the teacher's writing demonstration of composing the character of 節 *"zit3"* (save) meant for her. The structural aspect refers to how she perceived her teacher's character writing demonstration. Under the structural aspect, there are two strands namely the external and internal horizons. The external horizon is Teacher A's character writing demonstration, and the internal horizon the NCS Child X's understanding of the relationship between Teacher A's instructions and the

character writing demonstration.   As the evidence suggests, the NCS child X concluded that Teacher A's writing stroke order was from the left part to the right part.   As a result, she proceeded with her writing following her understanding.   Her handwriting reflects her discernment of Teacher A's writing demonstration.

The teachers' instructions were recorded and transcribed, and presented as the enacted object of learning.   The detail of Teacher A's instructions represent the learning contents in this activity and are also attached in Appendix V (pp.211).   Table (9) shows Teacher A taught the character of 節"zit3" (save), her oral instructions included the following :

Table (9) Oral Teaching Instructions by Teacher A

The oral instructions of Teacher A taken from in Appendix V (pp.211)	The analysis of Teacher A's teaching instructions
(Line 5) *horizontal stroke*	(1) names of the basic strokes
(Line 3) 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo)	(2) name of the upper component
(Line 5 and Line 7) *the point line does not touch the horizontal stroke in the upper component*	(3) the position of the strokes
(Line 9) *Do you see that this pattern looks like an opened door?*	(4)the metaphor of the pattern of strokes

Table (9) shows Teacher A's instruction in relation to the structure of the character.   She mentioned the name of the upper component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo) for

the children (Line 3). However, as seen from Picture a, the NCS Child X's handwriting reveals that she understood the demonstration differently. Apparently she did not write the upper of component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo) as instructed in Teacher A's writing demonstration.

Nevertheless, the performance of this NCS Child X represents her understanding and experience of Teacher A's writing demonstration though evidence shows that Teacher A mentioned the name of the component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo).

In addition, even for the other NCS children in the same class who were able to write the character of 節"zit3" (save) with the correct stroke sequence, they still did not mention what the name of the upper component in the character was. It shows that the NCS children followed the correct stroke sequence of the character, but they did not understand the name of the component as mentioned by Teacher A in her instructions.

5.3.2   The Teacher's Experience of Teaching Character Writing

From Chapter 4 of 'Data Analysis and Findings' in 4.3 Enacted Object of Learning (pp.96), at 4.3.2 in 2B Teaching characters as construct by component (pp.106-pp.114). These five teaching approaches of structuring components are shown in the Table (10) (pp.166).

Through the learning experience of the NCS Child X, the phenomenon was to relate to Teacher's A's oral instructions. To compare Teacher's A' oral instructions, it shows Teacher's A's oral instructions to be much less than the possible ways to teach components in the class. Refers to Table (10), Teacher A's oral instruction shows what teaching content was missed through her teaching instruction. The following table can show Teacher's A oral instruction and the possible ways of teaching components.

Table (10) Five Teaching Approaches of Structuring Components

Five teaching approaches were identified in teaching components in *4.3.2 –2B *(pp.106- pp.114)	Oral Teaching Instructions by Teacher A
(a) the component is a simple character	(1) names of the basic strokes (3) the position of the strokes (4)the metaphor of the pattern of strokes
(b) the meaning of components	Missing
(c) the position of components;	Missing
(d) the phoneme of a component;	(2) name of the upper component
(e) the kinds of the configuration of the characters.	Missing

In this way, the missing teaching content reflects Child X's reasons to construct the different way of seeing the teacher's character writing demonstration. The learning content shows Teacher A did not tell the children in the class about the meaning, the position and the kinds of the configuration of the character 節 *"zit3"* (save) (Picture a) in the class.

The case of Teacher A and Child X reflects the problems to be found in teaching character writing to the NCS children in the classroom. If the teachers are not precisely aware of the learning contents for the lesson's objectives, naturally the NCS children cannot learn accurately what the teachers want them to them during the teaching activities.

5.3.3   The Critical Feature in Teaching Approach

The term "critical features" refers to the part of the learning contents in the teaching activity. If a teacher wants her/his students to gain a particular way of understanding, or to develop a particular capability, the teacher must make it possible for them to discern features that are critical for that particular learning (Marton & Tsui, 2004).   With reference to this teaching activity, one of the most important parts of the learning content of Teacher A was the name of the component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo).   Child X in Picture (a) failed write the upper component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo) in her writing stroke order.   It shows that the teacher's oral instruction of the name of the component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo) could not indicate the component's position to Child X. In this case, Teacher A did not provide the "critical feature" for Child X in order for her to understand the meaning and the position of the component 竹花頭 *"zuk1 faa1 tau4"* (head of bamboo) in this case.

In this study, the NCS children were interviewed after they completed their character writing classwork.   The researcher asked them how they had learnt to copy the characters from the whiteboard onto their exercise books.   Some NCS children could imitate the verbal instructions given during their teacher's writing demonstrations to describe how to compose the characters, such as the names of the basic strokes.   However none of the NCS children mentioned the stroke sequence table which was displayed both on the whiteboard and the paper stripe attached in their exercise books, and was related to the structure of character writing.   This shows that the NCS children did not seem to have grasped the concept of the stroke sequence in relation to character writing.   The NCS children regarded the character writing demonstrations to be similar to the teaching instructions, in that they had to follow the teachers to compose the characters with the strokes.   This also suggests that the teaching

instructions directed the NCS children to focus on what strokes were drawn to form the shape of the characters. It was found that some NCS children could remember how to draw the strokes in a similar direction, to following the teacher's instructions but some could not. It can be concluded that the most crucial factor was whether the teachers could illustrate clearly how the components formed the characters because some preschool children, both the native Chinese and NCS could not associate stroke sequence with component formation in relation to the structure of characters.

On the other hand, the teachers said in the interview that the structure of characters was related to the meaning, grapheme and phoneme of characters. When the teacher enacted their character teaching in the class, they usually explained the meaning of the characters to the children before they demonstrated the character writing. The teachers did not only use verbal instructions in explaining the meaning of the character, they utilized gestures and English as well. This shows that the teachers were aware of the needs of the NCS children in the class; they used various possible ways to teach them the meaning of the characters. Having said that, in the case of Child X, the way she wrote the character 節 *"zit3"* (save) was related to the misunderstanding of the structure of the characters on the whiteboard because of her teacher's verbal instructions. This also illustrates that her teacher lacked cultural awareness when demonstrating the character writing to NCS children. Tse & Wong (2012) reported that one of the particular problems experienced by NCS students was writing characters with the components. They were affected by their previous experience in learning the orthography of their own native language, for example, learning to structure alphabets from left to right. Child X wrote the components from left to right to structure the character 節*"zit3"* (save). This directionality of scripts might be related to her native language. For this reason, the teachers should be more culturally aware in teaching

character writing especially the grapheme of characters.

5.3.4   Learning Stroke Sequence and Orthographic Awareness

The following learning excerpts were to illustrate how one of the NCS participating children, The NCS child, namely Child Y was shown in Picture (e) below, took part in the literacy card game in the classroom. The learning excerpts about the NCS Child Y were taken from the third part of the findings "Lived Object of Learning" in relation to the conceptions of Categories 3 (pp.149-151) which is learning character writing as being integrated into an identity group.   It means the NCS children understand the meaning of character writing as enabling them to participate into the native Chinese speaking children's activities.   In the case of the NCS Child Y, she totally participated into all teaching activities in the class.

One of the activities in her class, the set of Chinese literacy cards were placed on the open shelf of the classroom.   The literacy cards aimed to help the children review the structure of characters.   The set of cards included a few kinds of configurations of orthographic (Picture f on the next page) and specific kinds of components (radical) (Picture g on the next page) for structuring the characters.   Usually the children played with them during their free play time. Child Y had played with it many times before.
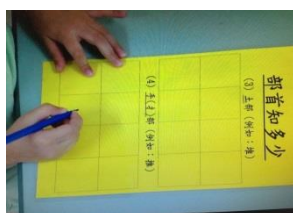

(e) Child Y

(f)Configurations of components

(g)Special kinds of component

As can be seen from Picture f, she was able to correctly circle three characters that were constituted by an upper part and a lower part component among nine characters.   Also she was able to circle three characters that had both left and right parts components from nine characters. When the researcher asked her what kind of configuration were the characters which she circled, she was able to name accurately the two kinds of configurations of the characters in the two card games.   Although she could not recognize what the characters were, she could point out the configurations of orthographic in the card games.   It shows that the NCS Child Y was able to use her orthographic awareness to focus on the positions of the components of the characters in the card games.

Past studies conclude that Chinese preschool children in Hong Kong are able to use components as perceptual units at the age of five (Chan, 1996; Ho et al., 2003).   The NCS Child Y had apparently also acquired her orthographic awareness to focus on the components of characters through her teacher's traditional teaching approach.   The NCS Child Y could name correctly what the two kinds of configurations were, which suggested that she understood her teacher's instruction regarding the position of the components in the characters.

The past study by Law et al., (1998) was unable to explain how the children in their first

years of schooling acquired the ability to decompose some of the characters into components. It is because it is limited by the research approach which cannot show the relationship between the learning and teaching in the classroom. Using a phenomenographic research approach, this study investigated the people's experience of the phenomenon. Apparently the NCS Child Y acquired her experience in the local preschool; she was taught to compose the characters with stroke sequence. For this reason, it strongly provides the evidence for the preschool children to have orthographic awareness because of their daily character handwriting learning through practicing stroke sequence in the preschools.

As seen in Picture g, the NCS Child Y was not able to use the specific kinds of components (radical) to compose any characters. In fact, the name of the component represents the meaning of the character which is semantic radical to give a clue to the meaning of a character (Ho et al., 2003). Shen & Ke (2007) examined a group of the NCS adult learners on how they predicted the new characters with their perception skills. The result indicated that the NCS adult learners could not guess the meaning of an unfamiliar compound character because they did not have the radical knowlegde. The present research confirms this finding: Although the NCS Child Y had acquired the perception skill to focus on the components, she did not have the radical knowledge to recognise the unknown characters in the card game (Picture g in pp.170).

The radical knowledge of NCS children therefore needs to be developed by teachers in their later schooling. Ho et al., (2003) investigated 60 native Cantonese speaking children aged five to eight years in preschools or schools in Hong Kong. The aim of the study was to investigate the developmental pattern of Chinese children's orthographic knowledge. The investigators reported that all the preschool participants had "Character Configuration Knowledge" as the foundational stage of orthographic knowledge development in characters.

The children would then, in five more stages, reach the stage of 'complete orthographic knowledge' during the six years in the primary schools. The NCS Child Y reached the foundational stage of orthographic knowledge in the same way as her native Cantonese speaking classmates in the preschool. This also suggests that the traditional character teaching approaches can be effective in teaching NCS preschool children when the teachers can provide the appropriate learning contents

The appropriate learning contents for the teaching of stroke sequence should allow the children to have a transition period, enabling them to work towards the goal step by step at their early writing stage. According to Chan et al. (2008) and Chan (2013b), preschool children developed their writing system from exploring the graphic features in their handwriting, from drawing lines to forming complicated characters. Therefore the teaching of stroke sequence and its demonstration are not limited to rote learning and drilling. The teacher should not expect children to be able to copy grapheme of the characters 100% correct in their first time. Chan et al. (2008) point out that preschool children have to acquire the necessary skills, such as visual analysis skills, in segmenting characters into components. The purpose of teaching stroke sequence is to demonstrate how to compose characters so the children can acquire orthographic skills (or their awareness of this raised) to decompose characters. As mentioned, preschool teachers teaching Chinese characters writing are encouraged by the curriculum guideline to do this through a variety of play activities (EdB, 2006). As found in the current study, one of the teacher participants successfully helped the children to learn the direction of the basic strokes through utilizing the children's motor skills. The sequencing of strokes can be used as one of the teaching activities in preschools to demonstrate how to compose characters with strokes.

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In summary, the findings of the present research reveal the obstacles that hinder the NCS children in their character handwriting. They also suggest what appropriate teaching contents can help facilitate the NCS children in learning the basic structure of characters. The NCS children are able to recognize the configurations of the compound characters through learning stroke sequences in the local preschools. This "Character Configuration Knowledge" is the orthographic awareness that allows them to switch focus from a cluster of strokes to the components, and this orthographic knowledge is likely to continue to develop in primary school.

5.3.5   Learning Characters Through Daily Experience

This section discusses the teaching instructions related to character recognition in the routine class activities. The learning excerpts about the NCS children were taken from Chapter 4 'Data Analysis and Findings' in 4.4 "Lived Object of Learning" in relation to the conceptions of Categories 1 (pp.135) which is learning character writing as being able to connect with their classroom experience. It means the conception of the NCS children to think about how the meaning of character writing can connect with their daily experience.

Chinese character recognition involves three elements of language: grapheme (the orthographic structure), phoneme (phonological) and meaning (semantic) (張志公 1991; Chan, 1996 and 謝錫金, 2002). Lam (2012) indicates what the relationships are between the learner and their learning character recognition, as outlined in the following Figure 5.

The following Figure 5 illustrates how a learner uses his/her listening and speaking skills when encountering the three elements (grapheme, phoneme and meaning) in recognizing Chinese characters. Also using the phenomenographic approach, Lam (2012) studied

teaching and learning activities of character recognition in preschools. He identified the learners' experiences when they attended the character recognition activities in the classroom. The following two learning excerpts identified the NCS children learning characters recognition through their daily experience. The following discussion will focus on how to provide effective teaching instruction for teaching character recognition through the NCS children's daily experience.

Figure 5

The relationships among the four aspects of learning (listening, speaking, recognition and writing) and

the three elements (grapheme, phoneme and the meaning) of characters in character recognition

(Lam, 2012)

聽懂、說出、認讀、字(詞)的內容重點的關係
字(詞)形(grapheme)

書面語言(written form)

認讀   書寫
(recognition)   (writing)

聽懂(listening)
字(詞)音(phoneme)   字(詞)義(meaning)
說出 (speaking)   口說語言(oral language)

The first learning excerpt: the two characters "蘿蔔"

The first learning excerpt is related to connecting graphemes with phonemes or meanings. As a lived object of learning, the NCS child participated in the whiteboard activity. She pointed to the two characters "蘿蔔" "*Lo4 baak6*" (carrot) on the whiteboard and said "*hung4*

lo4 baak6" (which meant red carrot) in three syllables. Although her pronunciations did not match the two characters on the character recognition card, she could pick up the plastic model carrot from the vegetable basket to match the meaning of the characters of "蘿蔔" "*Lo4 baak6*" (carrot). This suggests that the child could recognize the two characters "蘿蔔" "*Lo4 baak6*" (carrot) from her daily experience. She learnt from her Chinese teacher or classmates who said "*hung4 lo4 baak6"* (meaning "red carrot" in spoken Cantonese) in three syllables when naming this kind of vegetable. Apparently, she connected the two graphemes of the characters to the three syllables and the tangible object she was familiar with. However, what the NCS child said indicated that she had not mastered the "one character for one syllable" concept. Comparatively, in a past study by Chan (1990), Chinese preschool children were able to understand the one to one correspondence between a syllable and a character at 5 to 6 years old. When her teacher immediately told her that the pronunciations of the two characters had only two syllables, the NCS child followed her teacher to say the two phonemes of the two characters with her listening skills. However, it was uncertain whether the NCS child understood the phonemes to be one mapping from the graphemes of the characters. The NCS child was not instructed about the "one phoneme for one grapheme" rule using her visual skill in this activity. If the teacher connects the phonemes to the graphemes of the characters, the NCS child would be able to discern each phoneme, and connect it to one grapheme in the character recognition card.

The second learning excerpt: Group List Board

The second learning excerpt is related to how the NCS children hear their teachers' instructions through the routine class activities. For example, names of different class activities are repeated in the daily activities. The following learning excerpt is in fact about how the NCS children connected the meanings of the characters to the characters displayed on posters in the classroom. One of the posters had the three characters "分組表" *"fan1 zou2 biu2"* (Group List Board) on it. The children told the researcher that the poster was called "轉牌"*"zyun2 paai4"* (turn over your name card). This suggests that the NCS children were not able to recognise the three characters which they saw every day. The NCS children connected the meaning of the three characters on the poster to their teacher's instructions instead. They thought the teacher's instructions indicated the phonemes of the characters on the poster. Although the teacher did not deliberately teach the characters displayed on the poster in the class, the NCS children still noticed that the characters were related to their routine activities. Actually, Miller (2002) suggests that before children begin to learn to read, they are already surrounded by written words and they may well learn something about the regular features of their orthography before they acquire reading skills. The NCS children were able to discern that their teachers' instructions were related to the phonemes of the three characters displayed on the poster. Therefore, the teacher should instruct her class to speak with the phonemes of the three displayed characters, connecting the phonemes to the graphemes of the three characters. Tse et al., (2013) conclude from their survey results that many teachers think that children learn to recognize characters through handwriting practices. As shown in the above learning excerpt, the teacher did not notice that the NCS children were actually trying to connect her oral teaching instructions with the three displayed characters on the poster as they began to learn to recognize the characters.

The above two learning excerpts from the present research reveal the existing problems of the teachers in teaching character recognition in the class. Lam's (2012) theory illustrates the multi-dimensional nature in the relationships among the oral form and written form character recognition and the three skills of listening, speaking and character recognition. Teachers should therefore make it clear whether the learning contents of the teaching activities are related to the oral form or the written, when teaching character recognition. Otherwise, the NCS children would be unable to recognize the characters even though they have strong Chinese listening and speaking skills.

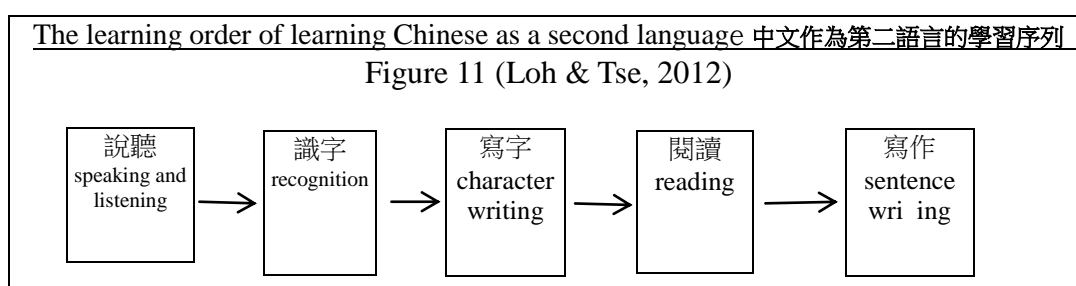## 5.4 How the Present Research Differs From the Past Studies

According to the publication by EdB (2014), it states an increasing amount of NCS preschool children attend the local preschools since the implementation of voucher scheme in 2007. It causes the preschool teachers to encounter a lot of difficulties to teach Chinese for NCS preschool children because they do not have the specific language knowledge. The EdB (Legislative Council, 2009) subsidized the tertiary institutions in Hong Kong to provide school-based support service for the teachers who taught Chinese for the NCS preschool children.

Two of the past studies are related to teaching Chinese as a second language to the NCS preschool children (Loh & Tse, 2012; Loh et al., 2013). This preschool curriculum is applied with IPA (Integrative Perceptual Approach) concept and SLA (second language acquisition) theory to the NCS preschool children. It means the preschools serve most of the NCS children. Based on the NCS preschool Chinese teachers recognized a lack of teaching resources to be used in teaching characters for the NCS children, the teachers were trained how to use the IPA approach learning materials in teaching of characters. For this

reason, the two studies (Loh & Tse, 2012; Loh et al., 2013) focused on the effectiveness of the IPA curriculum in how to apply to the NCS preschool children. The IPA curriculum addresses the needs of the NCS children especially if they do not have their families to support their Chinese language learning.

The following figure is the rationale for the IPA curriculum.

Figure 11

The learning order of learning Chinese as a second language 中文作為第二語言的學習序列
Figure 11 (Loh & Tse, 2012)

說聽 speaking and listening → 識字 recognition → 寫字 character writing → 閱讀 reading → 寫作 sentence wri ing

The IPA curriculum adapts the nursery rhymes to facilitate the NCS children in learning the meaning and the phoneme of the characters. Loh et al., (2013) illustrated various approaches to use in teaching systematically the knowledge of the structure of the characters, such as the orthographic configuration or the components. These worksheets in the IPA curriculum are illustrated with pictures so it provides clues to suggest the meaning for the components or characters. The NCS children do not have the burden for learning character recognition through drilling their character handwriting. The learning order of learning Chinese sets character recognition before writing characters. It aims for the NCS children to be familiar with the meaning and the phoneme before they learn to write characters. When the teachers teach the children to write, they feel they can easily to master the characters. Nevertheless, Lam (2012) indicates what the relationships are between learner and the character recognition in Figure 5. There are two kinds of character recognition in the activities which include oral language and written language. It means young children can

listen to the phoneme characters to connect to the objects without paying attention to the graphemes. One of the NCS children in the present research participated in the character recognition activity on the whiteboard; she read the two characters to be the three syllables. Although she is familiar with the meanings and the phonemes of the characters, she was not able accurately to recognize each grapheme on each phoneme. The present research reflects phoneme cannot be connected to grapheme.

In general, the learner needs to process the three elements (meaning, phoneme and grapheme) in learning character recognition. It is because each character to be pronounced as mono-syllable (Lee et al., 1986; Hanley et al., 1999; Miller, 2002). In order to help the children to focus on the grapheme, 祝新華 (1993) states that the function of practicing in handwriting is to impress the grapheme of the character in the brain. Ferreiro and Teberosky (1979) illustrate young children would read what they had written. The learner is taught to write characters so that the learner is helped to recognize the grapheme. As they are learning to write characters, young children can be directed to focus on the structure of the characters and the graphemes. Especially the stroke sequence can be used to compose the components orderly by a writer. For this reason, children can develop orthography awareness to decompose the components in the characters. The stroke sequence is based on the eight kinds of the basic strokes. Compared with the two hundred semantic components (radicals) and the eight hundred phonetic components in composing the compound characters (Ho & Bryant,1997), learners have spent a longer time to master the components through the meaning and the phoneme approach. The present research identifies children to be taught to understand the structure of the characters. It indicates the importance of the children learning to recognize characters through writing characters.

The IPA curriculum includes a variety of teaching resources to base on the theoretical

knowledge. It purposes to provide a quality teaching curriculum. The present research is to reveal teaching and learning character recognition through the current practice classroom setting in the local preschools. It reports on what happened with character recognition in the teaching and learning in the preschools. The aims are to indicate what the NCS children experience their learning in relation to the teaching activities. For this reason, the present research can provide the whole picture to review the problems of the teaching by the preschool teachers because the research findings are connecting student learning and classroom teaching. Thus, the present research informs the teacher about practical strategies for teaching character recognition and handwriting to the NCS preschool children in the local preschools. For this reason, the findings of the present research can be used as the reference to fill up the neglected area for teaching characters in preschools.

5.5 The Implication of Phenomenographic Study in the Present Research

The present research investigated the character writing activities which were constituted by the teachers and NCS preschool children in local preschools. The three research questions aimed to investigate the experiences of the teachers and NCS preschool children in the same phenomenon namely character writing activities through the traditional method of character writing demonstrations with stroke sequence. The aims of the categories are to theorize the everyday learning and teaching experience of NCS children and their teachers in preschools. The categories are to present the limited number of qualitatively different ways (Marton & Booth, 1997) in relation to the conceptions of the participants who encounter the same situation.

The findings in terms of teachers' conceptions of character writing are consistent with the five teaching principles in Guide to the Pre-primary Curriculum (EdB, 2006). This suggests

that the teachers were fully aware of the principles stated in the document and their behaviour in the teaching activities indeed demonstrated these five teaching principles. However, inconsistency was found between the purpose of stroke sequencing teaching and the teachers' teaching verbal instructions during the teaching activities. Some children were taught the sequencing of strokes through drilling because the teachers believed that the children learned how to structure the characters through the sequencing of strokes. The teachers therefore directed the children to focus on the names of the basic strokes and the stroke sequence.

The findings also show that some teachers did not mention what kinds of configuration of the components are in structuring the characters. This suggests that some teachers did not fully recognize the purposes of the traditional sequencing of strokes. Law et al. (1998) point out that Chinese character learner is able to compose components one after one to form characters through the traditional sequencing of strokes. If a character learner is able to recognize the shapes of components in the characters, they would understand hints about meaning or sound through the components. The demonstration of the stroke sequencing is to raise the children's orthographic awareness of the character, laying a foundation of orthographic skills in order for the children to recognize characters. It was also discovered that some teachers did not fully understand the purposes of teaching stroke sequencing and in turn they were not able to indicate clearly the structure of the characters. Furthermore, the teaching activities reveal that there was a lack of methods to teach stroke sequencing so the teachers mainly relied on teaching rote and the drill approach. According to the classroom observations in this study, only one teacher participant was found to be able to name the basic strokes with play activities, such as The Name of Basic Stroke Physical Exercise. The other three teacher participants relied on using the "imagine drawing in the air with one finger" teaching strategy which can be considered as a traditional teaching approach.

One of the implications of the present study is therefore that teaching stroke sequencing does not necessarily have to be limited to traditional teaching strategies. For example, there are an existing computer website called "Dragonwise Series" and CDs that help teach stroke sequencing and they aim to enhance the orthographic awareness of children in handling characters (Ki et al., 2003). Although computers in preschool classrooms are commonplace, none of the teacher participants used computers in their teaching activities. It shows that most teachers still adopted the 'chalk and board' approach in presenting the character writing demonstration. Scholars such as Tse et al. (2007) and Lee (2011) have in fact criticizes that the teaching of sequencing of strokes kills young children's learning interest. In fact, some teachers were found make the children say the sequencing of strokes again and again. One of the contributions of the present study is therefore to suggest different teaching strategies in the teaching of stroke sequencing. Furthermore, it is evident from this study that phenomenography is useful in investigating teaching and learning processes in character writing in local preschools and, more importantly, how these can be improved.

5.6   Summary

In this chapter, the findings are related to the 'Categories of Description' which reflect how preschool teachers and NCS preschool children perceived Chinese characters writing in their daily classroom experiences. The first part is on Intended Object of Learning. Five conceptions of the role of the preschool teachers in understanding character writing were identified. The five conceptions are generally similar to the five principles of teaching characters writing in the preprimary curriculum guideline.

The second part is Enacted Object of Learning; four conceptions of the role of the preschool teachers in enacting of character writing were identified. The findings reflects that their

enactment were consistent with their intention. The third part is Lived Object of Learning, and three conceptions of the NCS preschool children in their understanding of character writing were identified. Regarding children's conceptions of learning, Pramling (1983) indicate that children's conception of learning is related to developmental thinking, from the lowest to the highest levels, from 'concrete' to 'abstract', according to age. The NCS children in this study understood character writing in preschools on the basic level to the highest level, from daily experience to their identity group a concept they develop in preschools.

The findings contribute to knowledge in the field through helping preschool educators understand NCS children's experience in learning character writing in preschools. The suggestions are solely based on the problems found in the current character teaching practices in the local preschools, and they are believed to be practical as data were collected from the actual contexts.

Chapter 6: Conclusion

6.1 Introduction

In this chapter, a conclusion of the study will be presented and this will be done through looking from two aspects, namely limitations and suggestions. Limitations of this study are mainly related to the low number of participating NCS children, which may in turn affects the validity of this study using the phenomonographic research approach. Suggestions for further research will then be discussed.

6.2 Limitations of the Present Study

Findings of the present research provide new insight into the traditional teaching approach in local preschools, especially regarding the relationship between orthographic awareness and stroke sequencing. The findings indicate that the significance of stroke sequencing can be further investigated especially because Chinese character learning of NCS preschool children is still under-researched, particularly through adopting a qualitative approach. Past studies in the area focused primarily on the curriculum.

The limitations of this study are related to the limited number of NCS children, whose behavior was studied in relation to the teaching activities. Past research shows that Chinese children are able to acquire orthographic awareness in the upper level of the preschools. One of the twelve NCS children in this study was found to be able to recognize the configurations of the characters, demonstrated by her selection in the literacy card game. This suggests that this particular NCS child has the same level of orthographic awareness as her native Chinese speaking classmates.

The purpose of this phenomenographic study is not to examine what kind of teaching

instructions or teaching strategies are effective in teaching characters in local preschools. Instead, this present study aimed to reveal the hindrance in attempting to achieve the purposes of these teaching activities. Thus, this study can expose the reasons behind teachers not indicating clearly the features of the components as orthographic units and help to suggest possible teaching instructions to do so. Using a phenomenographic research approach in this study, although only one child was found to demonstrate this learning behavior, this can be understood to be related to the teaching strategies. For this reason, the validity in this study is not affected by the individual findings.

At the same time, the NCS children participants were L2 learners and some were therefore shy to speak Cantonese. Although the teachers assisted the researcher to interview the NCS children, sometimes they still did not want to be interviewed. Fortunately they did not resist having their character handwriting videotaped. Some NCS children even asked the researcher to teach them how to write the characters when they were doing their character writing exercises. They might have regarded the researcher as one of the teacher assistants in their class so they sought help from her. This also suggests that they were able to use Cantonese to communicate with the researcher directly in class.

6.3 Suggestions for Further Research

Since NCS children are L2 learners, they are likely to experience different problems compared to local preschool children, in learning characters. This study presents the situation in the local preschools, particularly one that adopted the traditional teaching method of character writing demonstration with stroke sequence. The teaching of characters with stroke sequencing focuses on teaching of characters in an intensive manner which is considered difficult as compared to methods through which they are taught to read (Lam,

2014). In fact, preschool teachers employ a variety of methods in teaching characters, such as storytelling, whole language approach, context approach, subject approach, project approach, rote learning with classical literature etc. (Tse et al., 2012). These teaching approaches enable children to read and write characters at the same time as they express their own meanings and understand the meanings of the characters. Using a phenomenographic approach to study how NCS children learn characters through storytelling, whole language approach, context approach, subject approach, project approach, rote learning with classical literature etc, the learning problems regarding the teaching and learning of Chinese character writing in this particular context can be exposed.

6.4   Summary

This study establishes the relationship between traditional approaches of the teaching of character writing and the experience of NCS children of the learning of character writing in local preschools. The findings also provide the direction for the possible ways of teaching character writing, particularly regarding teaching instructions of the preschool teachers. Furthermore, one of the NCS children was found to have similar orthographic awareness as her native Chinese speaking classmates. These outcomes provide a useful starting point for further studies to verify the effectiveness of the teaching strategies.

Reference

Akerlind, G.S. (2002). Principles and practice in phenomenographic research. In G.S. Akerlind & M. Lupton (Eds.), *Proceedings of the current issues in phenomenography symposium, Canberra, Australia*. Canberra: Australian National University.

Akerlind, G.S. (2005). Learning about phenomenography: interviewing, data analysis and the qualitative research paradigm. In J. Bowden & P. Green (Eds.), *Doing developmental phenomenograph*, (pp.63-73). RMIT University Press.

Akerlind, G. S., Bowden, J. and Green, P. (2005). Learning to do phenomenography: A reflective discussion. In J. Bowden & P. Green (Eds.), *Doing developmental phenomenograph*, (pp.74-100). RMIT University Press.

Ashworth, P. & Lucas, U. (2000). Achieving empathy and engagement: A practical approach to the design, conduct and reporting of phenomenographic research. *Studies in Higher Education, 25(3)*, 295-308.

Assan, T.E.B. (2011). Exploring learner understanding of economic and management sciences'(ems) concepts through variation of learning theory: classroom experience. *Problems of Education in the 21st Century*, 29, 7-21.

Binyong, Y. & Rigsenow, J.S. (1994). *Modern Chinese characters*. Sinolingua Beijing.

Bowden, J. A. (2005). Reflections on the phenomenographic team research process. In J. A. Bowden & P. Green (Eds.), *Doing developmental phenomenography*. Melbourne: RMIT University Press.

Bridges, S.M., Jackson, I., Yeung, P., Chan, K., Mok, I. and Aiston, S.J. (2016). Researching diversity in education in the Hong Kong Special Adminstration Region. *The International Journal Of Diversity in Education*.16(3).

Cantonese Pronunciation Electronic Dictionary Team. (1998). *A Chinese Talking Syllabary of the Cantonese Dialect: An Electronic Repository* Retrieved from http://humanum.arts.cuhk.edu.hk/Lexis/Canton2/ accessed August 16, 2016.

Carmichael, S. (2009). Language rights in education: a study of Hong Kong's linguistic minorities. *Hong Kong: Centre for Comparative and Public Law*, Faculty of Law, The University of Hong Kong.

Census and Statistics Department. (2011). *Population aged 5 and over by usual language*, 2001, 2006, 2011. The Government of the Hong Kong Special Administrative Region. Retrieved from http://www.census2011.gov.hk/en/main-table/A107.html

Chan, L., (1990). *Preschool children's understanding of Chinese writing*. (Unpublished Master's thesis). Institute of Education, University of London.

Chan, L. & Louie, L. (1992). Developmental trend of Chinese preschool children in drawing and writing. *Journal of Research in Childhood Education,* 6(2),93-99.

Chan, L. (1996). *Children learn to read and write Chinese analytically*. PhD's thesis, Institute of Education, University of London.

Chan, L. & Nunes, T. (1998). Children's understanding of the formal and functional characteristics of written Chinese. *Applied Psycholinguistics*, 19, 114-131.

Chan, L. & Nunes T. (2001). Explicit teaching and implicit learning of Chinese characters. In L. Tolchinsky, (Ed.), *Developmental Aspects in Learning to Write* (pp. 33-53). Dordrecht, Netherlands: Kluwer Academic.

Chan, L.K.S. & Chan, L. (2003). Early childhood education in Hong Kong and its challenges. *Early Child Development and Care*, 173: 7–17.

Chan, L., Cheng Z. L. & Chan, L.F. (2008). Chinese preschool children's literacy development: from emergent to conventional writing. *Early Years*, iFirst Article, 1-14.

Chan, J.K.Y. (2013a) Education for ethnic minority students in Hong Kong: Challenges facing the teachers. *International Journal and Social Sciences*, 2(1) 54-59.

Chan, S.P. (2013b). *A study of Hong Kong young children's early Chinese character writing development* (Unpublished doctoral dissertation). Hong Kong: The University of Hong Kong.

Chan, Y. Y. G. (1993). Development of writing skills in preschool children. In S. Opper (Ed.), *Early Childhood Education in Hong Kong*, (pp. 18-30). Hong Kong: Faculty of Education, The University of Hong Kong.

Dahlgren, L. O. & Fallsberg, M. (1991). Phenomenography as a qualitative approach in social pharmacy research. *Journal of Social and Administrative Pharmacy*, 8(4): 150-156.

Development Bureau. (2013). *Hong Kong Year Book 2013*. Hong Kong Government. Retrieved from http://www.yearbook.gov.hk/2013/en/pdf/E07.pdf

Ellis, R. (2008). *The study of second language acquisition*. Oxford: Oxford University Press.

Education Bureau. (1996). A study on Chinese handwriting at the kindergarten level. In *Guide to the Pre-primary Curriculum*. Hong Kong Government. Retrieved from http://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/preprimary/kg_guide_eng.pdf

Education Bureau. (2005). *Quality assurance inspection kindergarten annual report*. Hong Kong Government.   Retrieved from http://www.edb.gov.hk/index.aspx?Iangno+2&nodeID=744

Education Bureau. (2006). *Guide to the Pre-primary Curriculum*. Hong Kong Government. Retrieved from http://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/preprimary/pre-primaryguide-net_en.pdf

Education Bureau. (2008). *Consultation paper on developing a supplementary guide to Chinese language curriculum for non-Chinese speaking students*. Hong Kong Government. Retrieved from http://www.edb.gov.hk/attachment/sc/about-edb/press/consultation/devt_of_sg_to_chi_ncs_e.pdf

Education Bureau. (2013). *Kindergarten profile, 2013*. Hong Kong Government. Retrieved from http://chsc.hk/chsc-school-profiles-sec-lang-1.html

Education Bureau. (2014). *Figures and statistics, 2014/2015*. Hong Kong Government. Retrieved from http://www.edb.gov.hk/en/about-edb/publications-stat/figures/kg.html

Equal Opportunities Commission. (2012a). *Study on Racial Encounters and Discrimination Experienced by South Asians.* Retrieved from http://www.eoc.org.hk/EOC/Upload/UserFiles/File/ResearchReport/201203/Race_eExecutive%20Summary.pdf

Equal Opportunities Commission. (2012b). Education for ethnic minorities children, *Meeting of Legislative Council, Panel on Education on 12 December 2011*. Retrieved from http://www.eoc.org.hk/EOC/Upload/UserFiles/File

Gebhard, J.G. & Oprandy, R. (1999). *Language teaching awareness a guide to exploring beliefs and practices*. Cambridge University Press.

Graue, M. E., & Walsh, D. J. (1998). *Studying children in context: theories, methods, and ethics*. Thousand Oaks, CA: Sage.

Grosjean, F. (1982). *Life with two languages an introduction to bilingualism*. Harvard University Press.

Halliday, M.A.K. (2007). *Language and education. London*: Continuum.

Hau, K.T. (2008). *Tracking the adaptation development of non-Chinese speaking children (NCS) in mainstream schools.* Unison Hong Kong. Retrieved from http://www.unison.org.hk/DocumentDownload/R01-Position%20papers/2009/edcb2 -319-1-e.pdf

Ho, C.S-H., & Bryant, P. (1997). Phonological skills are important in learning to read Chinese. *Development Psychology*, 33(6), 946-951.

Ho, C.S-H., Yau, P.W-Y. & Au, A. (2003). Development of orthographic knowledge and its relationship with reading and spelling among Chinese kindergarten and primary school children. In C. McBride-Chang & H.C. Chen (Eds.), *Reading development in Chinese children* (pp. 51-71). Praeger Publishers.

Honorof, D. N., & Feldman, L. (2006). The Chinese character in psycholinguistic research: From, sturcture, and the reader.   In P. Li, L. H. Tan, E. Bates & O. J. L. Tzeng (Eds.), *The handbook of East Asian psycholinguistics, Vol.1* (pp. 195-208). New York: Cambridge University Press.

Holmqvist, M., Tullgren, C. & Brante, G. (2011). The object of learning – before, during and after a learning situation. *Journal of Systemics, Cybernetics & Informatics,* 9(2), 67-7

Johansson, B., Marton, F. & Svensson, L. (1985). An approach to describing learning as change between qualitatively different conceptions. In L. H. T. West & A. L. Pines (Eds.), *Cognitive structure and conceptual change*. New York: Academic Press, 233-257.

Ki, W.W., Lam, H.C., Chung, A.L.S., Tse, S.K., Ko, P.Y. & Lau, C.C. (2003). Structural awareness, variation theory and ICT support. *L1 – Educational Studies in Language and Literature* 3, 53-78.

Kim, Y. (2008). The effects of integrated language-based instruction in elementary ESL learning. *The Modern Language Journal*, 92(3), 431-451.

Krashen, S. D. (1988). *Second language acquisition and second language learning*. New York : Prentice Hall.

Ku H.B., Chan K.W. & Sandhu K.K. (2005) *A research report on the education of South Asian ethnic minority groups in Hong Kong* Hong Kong: Centre for Social Policy Studies, The Hong Kong Polytechnic University

Kwan, C.Y. (2014). Research on non-Chinese speaking children in recognition of Chinese characters. *Han-character and Classical Written Language Education (漢字漢文教育)*, 34,239–263.(In Chinese)

Lam, H.C. (2011). A critical analysis of the various ways of teaching Chinese characters. *Electronic Journal of Foreign Language Teaching*. 8(1), 55-70.

Lam, H.C. (2012). A phenomengraphic study on the learning and teaching of Chinese characters in preschools. *Chinese Language Teaching and Learning(華語文教學研究) 9*(3), 47-74.(In Chinese)

Lam, H.C. (2014). Different ways that preschool teachers children to write Chinese characters in Hong Kong classrooms. *Education Research Journal,* 29(1&2), 41-66.

Lam, H.C. (2016). Using phenomenography to investigate the enacted object of learning in teaching activities: the case of teaching Chinese characters in Hong Kong preschools. *Scandinavian Journal of Educational Research*.

Law, N., Ki, K.K., Chung, P.Y.K.& Lam, H.C. (1998). Children's stroke sequence errors in writing Chinese characters. *Cognitive Processing of the Chinese and the Japanese Language*, 10

Lee, S.Y., J.W. Stigler & H.W. Stevenson. (1986). Beginning reading in Chinese and English. In B. R. Foorman & A.W. Siegel (Eds.), *Acquisition of Reading Skills: Cultural Constraints Cognitive Universals*, (pp.123–148). Hillsdale, NJ: Lawrence Erlbaum.

Lee, M.T. N., Tse, S.K. & Loh, E. K.Y. (2011). The impact of the integrative perceptual approach on the teaching of Chinese characters in a Hong Kong kindergarten. *Early Child Development and Care*, 181(5),665-679.

Legislative Council Secretariat. (2009).*Legislative council panel on education Education for non-Chinese speaking students.* Legislative Council of HKSAR. Retrieved from *http://www.legco.gov.hk/yr08-09/english/panels/ed/papers/ed0112cb2-579-7-e.pdf*

Legislative Council Secretariat. (2014). *LCQ20: Learning Chinese as a second language by non-Chinese speaking students.* Legislative Council of HKSAR. Retrieved from *http://www.info.gov.hk/gia/general/201403/19/P201403190532.htm*

Leong, C.K. (1997). Paradigmatic analysis of Chinese word reading: research findings and classroom practices. In C.K. Leong & R. M. Joshi (Eds.), *Cross-language studies of learning to read and spell: phonologic and orthographic processing*, (pp.379-417). Dordrecht: Kluwer Academic Publishers.

Li, H., & Rao, N. (2005). Curricular and instructional influences on early literacy attainment: evidence from Beijing, Hong Kong and Singapore. *International Journal of Early Years Education,* 13(3), 235–253.

Lisenby, B.E. (2011). Early childhood education for ethnic minorities in Hong Kong: parent experience and policy support. *Asia-Pacific Journal of Research in Early Childhood Education*, 5, 1, 69-90.

Lo, M.L. (2012). *Variation theory and the improvement of teaching and learning*. Acta Universitatis Gothoburgensis : Goteborgs Universitet.

Loh, E.K.Y. & Tse, S.K. (2012). An investigation of school-based curriculum of effective Chinese character learning for Non-Chinese speaking kindergartens. *Han-character and Classical Written Language Education（漢字漢文教育）,* 28,171 –195.(In Chinese)

Loh, E.K.Y., Tse, S.K. & Tsui, S.K. (2013). A study of effectiveness of a school-based Chinese characters curriculum for Non-Chinese speaking kindergarteners: Hong Kong experience. *Han-character and Classical Written Language Education（漢字漢文教育）,* 30,277 –323.(In Chinese)

Marton, F. (1981). Phenomenography – describing conceptions of the world around us. *Instructional Science*, *10*, 177-200.

Marton, F. (1986). Phenomenography – a research approach to investigation different understandings of reality. *Journal of Thought*, 21, 28-49.

Marton, F. (1994). On the structure of awareness. In J. A. Bowden & E. Walsh (Eds.), *Phenomenographic research: variations in method* (pp. 176-201). Melbourne, Australia: Office of the Director EQARD, Royal Melbourne Institute of Technology.

Marton, F. & Saljo, R. (1984). Approaches to learning. In F. Marton, D. Hounsell & N. Entwistle (Eds.), *The experience of learning* (pp36-54). Scottish Academic Press. Edinburgh.

Marton, F., Carlsson, M., & Halasz, L. (1992). Differences in understanding and the use of reflective learning in reading. *British Journal of Educational Psychology*, 62(1),1-16.

Marton, F. & Booth, S. (1997). *Learning and awareness*. Mahwah, N J: Lawrence Erlbaum Associates.

Marton, F. & Tsui, A.B.M. (Eds.), (2004). *Classroom discourse and the space of learning*. Mahwah, N.J.: Lawrence Erlbeum.

Marton, F. & Pang, M.F. (2008). The idea of phenomenography and the pedagogy of conceptual change. In S. Vosniadou (Ed.), *International handbook of research on conceptual change* (pp.533-559). New York: Routledge.

Miller, K.F. (2002). Children's early understanding of writing and language: the impact of characters and alphabetic orthographies. In Li,W., Gaffney J.S. & Packard J.L. (Eds.), *Chinese children's reading acquisition theoretical and pedagogical issues* (pp.17-29). Kluwer Academic Publishers.

MOE, PRC (Ministry of Education, People's Republic of China). (2001). *Yuwen Kehehen Biaozhun* [Standards of Chinese language curriculum]. Beijing: Beijing Normal University Publisher.

Oxfam Hong Kong. (2016). *Survey on the enhanced Chinese learning and teaching support for non-Chinese speaking students in primary and secondary schools*. Retrieved from http://www.oxfam.org.hk/content/98/content_24743en.pdf

Pang, M.F. (2003). Two faces of variation: on continuity in the phenomenographic movement. *Scandinavian Journal of Educational Research*, 47(2),145-156.

Pang, M.F. & Marton, F. (2003). Beyond "lesson study" - Comparing two ways of facilitating the grasp of economic concepts. *Instructional Science*, 31(3), 175-194.

Patrick, K. (2000). Exploring conceptions: phenomenography and the object of study. In J.A. Bowden & E. Walsh (Eds.), *Phenomenography*. Melbourne: RMIT University Press.

Pinter, A. (2011). *Children learning second languages.* Palgrave Macmillan.

Pramling, I. (1983). *The child's conception of learning*. Sweden: Acta Universitatis Gothburgensis.

Pramling, I. (1996). Phenomenography and practice. In G. Dall'Alba & B. Hasselgren (Eds.), *Reflection on phenomenography: Towards a methodology?*(pp.83-101). Sweden: Acta Universitatis Gothburgensis.

Pramling Sammuelsson, I., Davidsson, B. & Fors, B. (2000). *Student teachers' and preschool children' questions about life - A phenomenographic approach to learning.* Sweden: Goteborg University, Department of Education.

Prosser, M. & Trigwell, K. (1997). Using phenomenography in the design of programs for teachers in higher education. *Higher Education Research & Development, 16(1)*, 41-54.

Richardson, J. T. E. (1999). The concepts and methods of phenomenographic research. *Review of Educational Research, 69(1),* 53-82.

Saljo, R. (1996). Minding action-conceiving of the world versus participation in cultural practices. In G.Dall'Alba, & Hasselgren, B. (Eds), *Reflections on phenomenography toward a methodology?* (pp.19-33). Goteborg: Acta Universitatis Gothoburgensis.

Saljo, R. (1997). Talk as data and practice: A critical look at phenomenographic inquiry and the appeal to experience. *Higher Education Research and Development, 16(2),* 173-190.

Sandberg, J.(1997). Are phenomenographic results reliable? *Higher Education Research & Development, 16*(2), 203-212.

Shen, H.H. & Ke, C. (2007). Radical awareness and word acquisition among nonnative learners of Chinese. *The Modern Language Journal*, 91, i, 0026-7902/07/97-111

Shu, H. (2003). Chinese writing system and learning to read. *International Journal of Psychology, 38*(5),274-285.

Shu, H., Chen, X., Anderson, R.C., Wu, N. & Xuan, Y. (2003). Properties of school Chinese: implications for learning to read. *Child Development*, *74*(1),27-47.

Tabors, P.O. (1997). *One child: two language: a guide for preschool education of children learning English as second language.* Baltimore, MD: Brookes Publishing.

Tam, P. C. (2005). Variations in Drama-in-Education (教育戲劇中的變易). In Ki, W. W., Tse, S. K., Shum, M. S. K. (Eds.), *The theory of variation and the space of learning* (pp.66-77). Hong Kong: Hong Kong University Press. (In Chinese).

Thompson, L.A. (1995). *Bilingual children entering preschool education: An analysis of social and linguistic process*. PhD's dissertation, University of Durham, England.

Trigwell, K. & Prosser, M. (1966). Changing approaches to teaching: a relational perspective. *Studies in Higher Studies, 21,* 275-284.

Tse, S.K., Chan, W. S., Ho, W.K., Law, N., Lee, T. & Yu, F. Y. (1995). *Chinese language education for the 21st century: a Hong Kong perspective*. Hong Kong: The University of Hong Kong.

Tse, S.K., Marton, F., Ki, W.W. & Loh, E. K.Y. (2007). An integrative perceptual approach for teaching Chinese characters. *Instructional Science*, 35, 375-406.

Tse, S. K., & Cheung, W. M. (2010). Chinese and the learning of Chinese. In F. Marton, S. K. Tse, W. M. Cheung (Eds.), *On the Learning of Chinese (pp. 1-8)*. The Sense Publisher.

Tse, S.K. & Wong, M. Y. (2012). An assessment tool for the learning of Chinese character writing by non-Chinese students. *Han-character and Classical Written Language Education (漢字漢文教育)*, 28, 279–298.(In Chinese)

Tse, S.K., Lee, M.T.N., Law, K.Y. & Chan, T.S.P. (2014). Integrative perceptual approach to learning Chinese characters via network building. *Han-character and Classical Written Language Education (漢字漢文教育)*, 34, 213–238.(In Chinese)

Unison Hong Kong (2001). *Research Report on Comparative Study on School Life Adaptation of School-age New Arrivals: Mainland China and Southeast / Southern Asian Countries.* Hong Kong: The Author.

Unison Hong Kong (2002) *The right to an education: discrimination against ethnic minority children in Hong Kong's education system*. Paper prepared for presentation on Population Policy and the Future Development of Hong Kong Seminar, co-organized by the Centre for Social Policy Studies of the Hong Kong Polytechnic University and Hong Kong Christian Institute.

Walsh, E. (1994). Phenomenographic analysis of interview transcripts. In J.A. Bowden & E. Walsh (Eds.), *Phenomenograhic research: variations in method the Warburton Symposium* (pp. 17-29). Melbourne: RMIT University Press.

Winitz. H., Gillispie, B. & Starcev, J. (1995). The development of English speech patterns of a 7-year-old Polish-speaking child. *Journal of Psycholinguistic Research*, 24 (2). 117-143.

Yates, C., Partridge, H. & Bruce, C. (2012). Exploring information experiences through phenomenography. *Library and Information Research*, 36 (112), 96-104.

Zhou,Y-L., McBride-Chang, C., Fong, Y.-C.C, Wong, T.-Y.T. & Cheung, S.K. (2012). A comparison of phonological awareness, lexical compounding, and homophone training for Chinese word reading in Hong Kong kindergartners. *Early Education and Development*, 23: 475–492

斯霞(1978)。談談識字教學。南京師範學院附屬小學、南京師範學院教育系(編)，*斯霞教教育經驗選編*（第12-20頁）， 北京教育出版社。

許寶訓(1983)。*書法自學叢帖--正書(上冊)*，上海 ： 上海書畫出版社。

張志公(1991)。*張志公文集*，廣州: 廣東教育出版社。

張田若（1991）。"集中識字．大量閱讀．分步習作" 教學體系的理論與實踐。郭林、張田若(編)，*集中識字教學的理論與實踐*（第7-93頁），北京 ： 中國教育科學出版社。

劉曼華（1993)。『三個面向』 與語文教育改革--『集中識字』教學的新發展。編輯委員會(編)，*語文和學習一九三年國際語文教育研討會論文集*(第312-318頁)，香港 ： 香港教育署語文教育學院、香港大學課程香港系、香港應用語言學會。

谷錦屏(1994) 。小學聽讀識字的教學研究計劃。*北京教育，Z1期*，第63-64頁。

谷錦屏(2000) 。幼兒聽讀遊戲識字研究。*天津市教科學院學報*， 第5期，第54-51頁。

黃耀樞（1997） 。*小學寫字教材概要*，香港 :萬盈圖書公司。

彭聃齡、王春茂（1997）。漢字加工的單元: 來自筆畫數效應和部件數效應的證據。《*心理學報*》，第 1 期，第 8-6 頁。

關之英(2002) 。*漢語教學與教師培訓*。成都:四川人民出版社。

謝錫金(2002)。*綜合高效識字教學法*，謝錫金（主編），香港：青田教育中心。

Appendix I : Consent Letters To The Participants

CONSENT TO PARENT OF NCS PERSCHOOLER PARTICIPATE IN RESEARCH

**The research project of a phenomenographic study about the learning and
teaching of Chinese characters to the non-Chinese speaking preschool children**

I _____ hereby consent to my child participating in the captioned research supervised by Dr LAM Ho Cheong and conducted by NG Po Kuen Emmy.

I understand that the information obtained from this research, such as the artefacts (the children's Chinese writing) may be used in future research and may be published. However, my child's right to privacy will be retained, i.e., the personal details of my child will not be revealed. The permission will be obtained in advance from participants, if the audio or video data will be used for public dissemination.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefits and risks involved. My child's participation in the project is voluntary.

I acknowledge that we have the right to question any part of the procedure and can withdraw at any time without negative consequences.

Name of participant child

Name of Parent or Guardian _____

Signature of Parent or Guardian _____

Date _____

Appendix I : Consent Letters To The Participants

INFORMATION SHEET

The research project of a phenomenographic study about the learning and teaching of Chinese characters to the non-Chinese speaking preschool children

Your child is being invited to participate in a research study to be supervised by Dr LAM Ho Cheong and conducted by NG Po Kuen Emmy, who is a student of the Department of Early Childhood Education in The Hong Kong Institute of Education as the thesis component of the Doctorate of Education Degree (EdD).

PURPOSE OF THE STUDY

The aim of the proposed research is to focus on how NCS preschoolers learn Chinese characters in local Chinese preschools. I will use the phenomenographic approach. The data will be collected in the NCS preschool children's classroom so it can reflect their authentic situations. The proposed research can enhance educational practitioners' understanding of specific difficulties which can arise when teaching Chinese characters to NCS preschool children.

PROCEDURES

The duration of the research project is for twelve times of the class observation from November, 2014 to January, 2015. I shall attend the class for twice a week for 60 minutes during the Chinese learning activity time. I will use video recording the Chinese teacher teaching Chinese character and your child writing Chinese characters. Your child will complete her/his Chinese character writing of their classwork then the teacher will ask your

child to tell the teacher what their writings are about.   I guarantee the research would not cause any inconvenient for your child learning Chinese.

POTENTIAL RISKS AND DISCOMFORTS

There are no known or anticipated physical or psychological risks for participants in this study.

PAYMENT FOR PARTICIPATION

There is no payment for participation in this study.

CONFIDENTIALITY

Any personal information that is obtained in connection with this study will remain confidential and will not be disclosed.   Interview questions, participant's Chinese writing, video recordings, photographs, and field notes will be kept by me.   I shall dispose the data within two years after my completion of this dissertation of Doctorate of Education.   The hard copy data will be shredded and the soft copy data will be deleted by me.   I will only display my data to the supervising doctoral committee at the Hong Kong Institute of Education.   I understand that the information obtained from this research, such as the artefacts (the children's Chinese writing)   may be used in future research and may be published.   However, my child's right to privacy will be retained, i.e., the personal details of your child will not be revealed.   The permission will be obtained in advance from participants, if the audio or video data will be used for public dissemination.

PARTICIPATION AND WITHDRAWAL

You can choose whether your child participates in this study or not. If you volunteer your child to be in this study, you may withdraw your child at any time without consequences of any kind. Your child may also refuse to answer any questions he or she doesn't want to

answer and still remain in the study.

SUBSEQUENT USE OF DATA

The information obtained from this research, such as the artefacts (the children's Chinese writing) may be used in future research and may be published. However, my child's right to privacy will be retained, i.e., the personal details of your child will not be revealed. The permission will be obtained in advance from participants, if the audio or video data will be used for public dissemination.

RIGHTS OF THE PARTICIPANTS

You and your child have every right to withdraw from the study at any time without negative consequences. All information related to your child will remain confidential, and will be identifiable by codes known only to the principal researcher.

If you would like to obtain more information about this study, please contact NG Po Kuen Emmy at telephone number   or her supervisor Dr. H.C. LAM at telephone number

If you or your child have/ has any concerns about the conduct of this research study, please do not hesitate to contact the Human Research Ethics Committee by email at hrec@ied.edu.hk or by mail to Research and Development Office, The Hong Kong Institute of Education.

Thank you for your interest in participating in this study.

NG Po Kuen Emmy

Principal Investigator

Appendix I : Consent Letters To The Participants

有關資料

在幼教課室的非華語幼兒的中文學習與教導之現像圖析學研究

誠邀貴子女參加林浩昌博士負責監督，吳寶娟負責執行的研究計劃。她是香港教育學院學生。

研究的目的
這研究的目的是把重點放在非華語幼兒在本地的中文幼稚園如何學習中文字。我將使用現象圖學的研究方法。這研究是在非華語學前兒童的課堂中進行觀課，因此它可以反映他們的真實情況。這研究可以提高幼兒教育工作者對認識中文教學時，面對非華語學前兒童可能出現的困難。

程序
該研究項目是十二次中文教學活動由 2014 年 11 月至 2015 年 1 月 。上述期間我將會在課室一個星期兩次的觀課，觀課時間在中文教學的活動時間，大約 60 分鐘。我會用錄影記錄中文老師教授書寫中文字和非華語幼兒寫中文字。當非華語幼兒完成他們在中文課堂書寫中文字，老師會請非華語幼兒告訴我 老師他們寫了甚麼中文字。我保證研究不會造成非華語幼兒學習中文有任何不愉快及壓力。

潛在的風險和不適
沒有已知的或預期的參與者在這項研究中身體或心理風險。

是否需要支付款項給予參與者
不需要付款項給參與這項研究的參與者。

保密
本研究所獲得的所有資料，有關幼兒與他們的父母的資料將被嚴格保密，他們的資料不會被披露及識別。在研究的書面和口頭的資料也不會被使用他們個人的名字。不論在面談時，參與的幼兒所寫的中文字，錄像，照片和現場記錄將只有由我保存，直到此研究被編寫成本人的博士論文後的兩年之內 ，上述的資料最終將被撕碎處置。我將只展示我的資料給予在香港教育學院的博士生監督委員會。本人理解此研究所獲得的資料(拍攝或錄音所得片段需要預先獲得授權)可用於未來的研究或在學術會議公佈。然而本人有權保護敝子弟的隱私,其個人資料將不可以被披露。

參與和退出
你可以選擇你的孩子是否參與這項研究。如果你自願讓你的孩參與這項研究，你可以在

任何時間決定你的孩子退出研究，沒有任何形式的後果。你的孩子也可以拒絕回答他或她並不想回答的問題，但仍保持參與此研究。

繼續使用的資料

此研究所獲得的資料(拍攝或錄音所得片段需要預先獲得授權)可用於未來的研究或在學術會議公佈。然而本人有權保護敝子弟的隱私，其個人資料將不可以被披露。

參與者的權利

閣下及貴子女享有充分的權利在任何時候決定退出這項研究，更不會因此引致任何不良後果。凡有關　貴子女的資料將會保密，一切資料的編碼只有研究人員得悉。

如閣下想獲得更多有關這項研究的資料，請與 ＿(研究員姓名)＿
＿＿＿＿＿聯絡，電話＿＿＿＿＿或聯絡她的導師＿＿＿＿，電話＿＿＿＿＿＿。

如閣下或　貴子女對這項研究有任何意見，可隨時與香港教育學院人類實驗對象操守委員會聯絡(電郵：hrec@ied.edu.hk; 地址:香港教育學院研究與發展事務處) 。

謝謝閣下有興趣參與這項研究。

(研究員姓名)＿
首席研究員

Appendix I : Consent Letters To The Participants

CONSENT TO PRINCIPAL OF PRESCHOOL PARTICIPATE IN RESEARCH

The research project of a phenomenographic study about the learning and teaching of Chinese characters to the non-Chinese speaking preschool children

I _____ hereby consent to my preschool participating in the captioned research supervised by Dr LAM Ho Cheong and conducted by NG Po Kuen Emmy.

On behalf of my preschool, I understand the artefacts obtained from this research (such as the children's Chinese writing) may be used in future research and may be published. The permission will be obtained in advance from my preschool, if the audio or video data will be used for public dissemination. However, my preschool right to privacy will be retained, i.e., my preschool details will not be revealed.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefits and risks involved. My preschool participation in the project is voluntary.

I acknowledge that my preschool has the right to question any part of the procedure and can withdraw at any time without negative consequences.

Name of participant preschool

Name of preschool principal

Signature of the principal

Date

Appendix I : Consent Letters To The Participants

學前機構參與研究同意書

在幼教課室的非華語幼兒的中文學習與教導之現像圖析學研究

本學前機構＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿同意參加由林浩昌博士負責監督，吳寶娟執行的研究項目。

我謹代表本學前機構理解此研究所獲得的資料(除拍攝或錄音所得片段需要預先獲得授權外)可用於未來的研究和學術發表 。然而本學前機構有權保護敝學前機構的隱私，本學前機構資料將不會洩漏。

我謹代表本學前機構對所附資料的有關步驟已經得到充分的解釋並理解可能會出現的風險。本學前機構是自願參與這項研究。

我謹代表本學前機構有權在研究過程中提出問題,並在任何時候決定退出研究，更不會因此引致任何不良後果。

學前機構的名稱:

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

學前機構校長名稱:

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

學前機構校長簽名

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

日期:

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

Appendix I : Consent Letters To The Participants

CONSENT TO CHINESE TEACHER PARTICIPATE IN RESEARCH
The research project of a phenomenographic study about the learning and
teaching of Chinese characters to the non-Chinese speaking preschool children

I _____ hereby consent to my participating in the captioned research supervised by Dr LAM Ho Cheong and conducted by NG Po Kuen Emmy.

I understand that information obtained from this research, such as the artefacts (the children's Chinese writing) may be used in future research and may be published. However, your right to privacy will be retained, i.e., the personal details will not be revealed. The permission will be obtained in advance from participants, if the audio or video data will be used for public dissemination.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefits and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any time without negative consequences.

Name of teacher participant

Signature of participant _____

Date _____

Appendix I : Consent Letters To The Participants

中文老師參與研究同意書

在幼教課室的非華語幼兒的中文學習與教導之現像圖析學研究

茲同意參加由林浩昌博士負責監督, 吳寶娟執行的研究項目。

本人理解此研究所獲得的資料(拍攝或錄音所得片段需要預先獲得授權)可用於未來的研究和學術發表。然而本人有權保護本人的隱私,本人資料將不會洩漏。

本人對所附資料的有關步驟已經得到充分的解釋並理解可能會出現的風險。本人是自願參與這項研究。

本人理解我有權在研究過程中提出問題,並在任何時候決定退出研究,更不會因此引致任何不良後果。

中文老師姓名:

中文老師簽名:

日期:

Appendix II: Data Collection Tables

Table I

	observations	Field notes	Interviews	
			Teachers	**NCS Preschool children**
What do the teachers intend to teach?		*the aim of their preparation of daily lesson activities.	*Semi-structured interview questions in App III.	
What do the Chinese teachers enact in their Chinese teaching in the classrooms?	*The teacher how to write the Chinese characters on the whiteboard.	*the interaction with the NCS children and the other children in the class.		
What are the preschool children able to perform after the teaching of their Chinese teachers in the classrooms?	*how the NCS preschool children's copy the Chinese characters from the white board to their exercise books.	*NCS preschool children's response when they were taught by the Chinese teacher and their social interaction in the classroom.		*Semi-structured interview questions in App IV.

Table II

	Video or audio recording	**Writing artefacts**	**Photographic documentation**
What do the teachers intend to teach?		*teaching plans	
What do the Chinese teachers enact in their Chinese teaching in the classrooms?	* the teachers proceeded of character writing demonstration on the white board.		*the writing on the whiteboard. *the wall and the decoration with Chinese characters. *the Chinese literacy games.
What are the preschool children able to perform after the teaching of their Chinese teachers in the classrooms?	*the NCS children proceeded of the written characters when they copied them from the white board to their exercise books.	*the NCS preschool children's written characters in their exercise books.	*Chinese literacy activities by the NCS preschool children

Appendix III: Interview Questions-Teacher

<u>Semi-structured interview questions for teachers:</u>

1. Please tell me what did you do when you taught the children to learn the meaning and sound of the characters?

2. Please tell me what did you do when you taught the children to write characters?

3. Please tell me what did you do when you promoted the children in using the written characters in the class?

4. Please tell me what did you do when you promoted the NCS children in learning the characters?

Appendix IV: Interview Questions-NCS Children

Semi-structured interview questions for NCS preschool children:

These questions in below were used to interview the NCS preschool children after they complete their character handwriting exercise each time.

1. Please tell me how to pronounce these written characters (pointing at the written characters in their exercise book) and what is their meaning?

2. Please tell me how do you know to write these characters?

3. If they said the teacher to tell how to write it, please tell me what the teacher said?

Appendix V: The Detail of Oral Teaching Instructions by Teacher A

The table is to show Teacher A's oral teaching instructions

The oral teaching instruction of Teacher A in teaching character of 節 *"zit3"*(save)	
Line 1 Teacher A: The two characters are pronounced Saving. Line 2 Children: Saving. Line 3 Teacher A: All right, let's learn how to compose the character of 節 , it has got "head of bamboo". Line 4 Children : " head of bamboo." Line 5 Teacher A: All right, left falling stroke, horizontal stroke and point stroke, but the point stroke does not touch the horizontal stroke. Line 6 Children : No, it doesn't. Line 7 Teacher A: So the other side is the same as this side. The point stroke does not touch the horizontal stroke in the other side either. Then, horizontal stroke, vertical stroke, horizontal stroke, horizontal stroke, vertical stroke, hooked stroke and point stroke. Do you notice this point stroke touches the hooked stroke? Then what next? Line 8 Teacher & Children: horizontal stroke, straight stroke and hooded stroke Line 9 Teacher : Then the straight stroke. Do you see that this pattern looks like the opened door ? Line 10 Children : Yes, we do.	老師: 呢個詞語係節約。 幼兒: 節約。 老師: 好啦，望下節約點樣寫先，我地上面係竹花頭。 幼兒: 竹花頭。 老師: 好啦，撇、橫、點，但係個點有冇黏住？ 幼兒: 冇既。 老師: 冇既，兩個都係個點唔掂住。好啦，跟住橫、直、橫、橫、直、勾、點。呢個點就掂住啦喎。好，跟住隔離。 老師及幼兒:.橫、直、勾。 老師: 跟住直。呢度打開，架，睇唔睇到？ 幼兒: 睇到。