

Literacy and numeracy in early childhood
Chinese immigrant parents' perception of children's learning

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Abstract

Literacy and numeracy are two key learning areas which contribute to children's educational outcomes throughout schooling. Research demonstrates that young children begin to develop their first understanding of literacy and numeracy from their everyday experiences at home with their families in their early years, and their experiences influence later learning.

Chinese parents traditionally hold high expectations for their children's academic achievement. Understanding Chinese children's literacy and numeracy acquisition in early childhood within their family and cultural contexts can help early childhood educators value the knowledge and skills that a child brings to the educational context.

This study investigates six Chinese immigrant parents' perceptions of their children's literacy and numeracy acquisition in early childhood within the Aotearoa New Zealand context. The participants explored their expectations of literacy and numeracy learning in the early years based on their cultural values of education and their social situation as an immigrant with English as a second language. Face-to-face interviews and follow-up telephone interviews were the main data collection instruments. The findings of the study indicate that participants hold some traditional values of education grounded in Confucian philosophy and systematically conceptualise their perspectives of young children's learning within the New Zealand context. This study found that all participants place a high value on literacy and numeracy learning and conduct various educational activities at home to facilitate their children's literacy and numeracy through the preparation of a highly supportive environment and through parent-child interaction. The evidence also shows that differences exist in literacy and numeracy activities conducted by participants in their homes. Traditional Chinese instructional learning strategies coexist with the child-initiated and play-based approach in those families. In addition, participants value their children's learning experiences in New Zealand early childhood education settings. Significantly, they view early childhood educators' beliefs of

children's learning and strategies applied to facilitate young children's literacy and numeracy acquisition as key factors which contribute to children's learning outcomes.

This study makes a contribution to the New Zealand literature of Chinese immigrant parents' beliefs of children's literacy and numeracy development. Early childhood educators can gain a new understanding of how Chinese parents perceive their children's learning based on their pre-established ethnic identities and current social influences in Aotearoa New Zealand.

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Table of Contents

ABSTRACT.....	II
ACKNOWLEDGEMENTS.....	IV
LIST OF FIGURES	VIII
FIGURE ONE: CHINESE IMMIGRANT PARENTS' EXPECTATIONS OF EARLY EDUCATION IN THE FOUR AREAS.....	VIII
ATTESTATION OF AUTHORSHIP	IX
CHAPTER ONE: INTRODUCTION	1
THE RESEARCH BACKGROUND.....	1
<i>Early childhood education in New Zealand</i>	2
CENTRAL QUESTIONS, SIGNIFICANCE AND SCOPE OF RESEARCH	6
<i>The significance of the study</i>	6
<i>The scope of the study</i>	7
OUTLINING THE CHAPTERS.....	7
<i>Chapter 2: Literature review</i>	7
<i>Chapter 3: Methodology</i>	7
<i>Chapter 4: Findings</i>	8
<i>Chapter 5: Discussion</i>	8
<i>Chapter 6: Conclusion</i>	9
CHAPTER TWO: LITERATURE REVIEW	10
DIVERSITY IN NEW ZEALAND	11
CHINESE PERCEPTIONS OF LEARNING	11
<i>Chinese learning styles</i>	15
<i>Early childhood education in China</i>	17
DYNAMIC CULTURE	19
<i>Maintenance of home language</i>	21
EARLY LITERACY AND NUMERACY ACQUISITION	22
GOVERNMENT EXPECTATION.....	22
SCHOOL READINESS	23
<i>English as second language</i>	24
EARLY LITERACY DEVELOPMENT	25
<i>Pre-reading and pre-writing skills</i>	27
<i>Influence of home and culture</i>	28
<i>Cultural difference in literacy learning</i>	29
<i>Oral language and literacy</i>	30
EARLY NUMERACY ACQUISITION	31
<i>Cultural learning experiences</i>	33
<i>Early numeracy acquisition in China</i>	34
<i>Relationship between language and numeracy learning</i>	36
<i>Vocabulary, oral language and numeracy</i>	36
LITERACY AND NUMERACY LEARNING EXPERIENCES IN EARLY CHILDHOOD SETTINGS	37
<i>Teacher's role</i>	37
<i>Learning across home, early childhood settings and primary school</i>	39
<i>Developing culturally responsive programmes</i>	39

CHAPTER THREE: METHODOLOGY.....	43
BACKGROUND OF THE STUDY	43
THE THEORETICAL FRAMEWORKS	44
<i>The social construction of reality.....</i>	45
<i>Subjective knowledge</i>	45
DATA COLLECTION AND ANALYSIS	46
<i>Qualitative research</i>	46
<i>Primary method: Individual face-to-face interviews</i>	47
<i>Method two: Telephone interviews.....</i>	48
<i>The participants.....</i>	48
<i>Semi-structured interview.....</i>	50
<i>Interview questions design.....</i>	51
<i>Data collection.....</i>	52
<i>Interviews</i>	53
<i>Data analysis.....</i>	54
ETHICAL CONSIDERATIONS.....	55
<i>Voluntary participation.....</i>	55
<i>Confidentiality and anonymity</i>	55
<i>Positioning the researcher</i>	56
VALIDITY AND TRANSFERABILITY	56
CHAPTER FOUR: RESEARCH FINDINGS.....	59
PARTICIPANTS' BACKGROUNDS.....	59
BRIEF INTRODUCTION OF FINDINGS	60
ACHIEVING IN EDUCATION	62
CHINESE PERCEPTIONS OF LEARNING IN EARLY YEARS	65
INFLUENCES OF IMMIGRATION.....	66
PERCEPTIONS OF EARLY CHILDHOOD	68
LEARNING INTEREST AND PLAY	68
LITERACY AND NUMERACY LEARNING AT HOME	71
EARLY LITERACY LEARNING	72
NUMERACY ACQUISITION.....	74
CULTURE CONFLICT: HANDS ON OR HANDS OFF?.....	75
LEARNING NUMERACY WITH ENGLISH AS SECOND LANGUAGE.....	77
LITERACY AND NUMERACY IN EARLY CHILDHOOD EDUCATION SETTINGS	78
BEING BILINGUAL	79
CHAPTER FIVE: DISCUSSION OF FINDINGS.....	82
MAINTAINING CHINESE TRADITIONAL VALUES OF EDUCATION.....	83
LITERACY AND NUMERACY LEARNING AT HOME	89
<i>Literacy.....</i>	89
<i>Numeracy acquisition.....</i>	91
DYNAMICS OF LEARNING	95
<i>Academic learning and play.....</i>	96
<i>Parent-child relationships.....</i>	97
<i>Maintain Chinese beliefs</i>	98
REFLECTIONS ON LITERACY AND NUMERACY IN EARLY CHILDHOOD SETTINGS.....	99
CHAPTER SIX: CONCLUSION.....	103
REVIEW OF THE KEY FINDINGS.....	103
<i>School readiness.....</i>	105
<i>Changes in parental beliefs.....</i>	109

STRENGTHS AND LIMITATIONS OF THE STUDY	111
IMPLICATIONS OF THE STUDY	111
FURTHER RESEARCH POSSIBILITIES	113
CONCLUSION.....	114
REFERENCES.....	118
APPENDICES.....	127
APPENDIX A: INVITATION FOR PARTICIPATION (ENGLISH)	127
APPENDIX B: INVITATION FOR PARTICIPATION (CHINESE)	129
APPENDIX C: PARTICIPANT INFORMATION SHEET	131
APPENDIX D: THE CONSENT FORM.....	135
APPENDIX E: INDICATIVE INTERVIEW QUESTIONS	137

List of Figures

Figure One: Chinese immigrant parents' expectations of early education in the four areas.

ATTESTATION OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Chapter One: Introduction

This qualitative study investigates six Chinese immigrant parents' educational expectations of their children's literacy and numeracy acquisition in early childhood in Aotearoa New Zealand. Educational activities conducted by participants at home to facilitate their children's literacy and numeracy learning are explored in this study. This research is underpinned by different world views of young children's learning: from traditional Chinese Confucian perspectives (Confucius, 2010) and the New Zealand early childhood curriculum Te Whāriki (Ministry of Education, 1996). This chapter outlines an overview of the background of the study, the main objectives, significance and scope of the study, and a summary of each chapter of the thesis.

The research background

This study explores a group of Chinese immigrant parents' broad perceptions of children's learning in early childhood and the educational activities at home that support their children's literacy and numeracy development within the Aotearoa New Zealand context. Clandinin and Connelly (2000, p. 122) suggest that the researcher exploring people's life stories and experiences needs to "articulate a relationship between one's personal interests and sense of significance and larger social concerns expressed in the works of others". My interest in exploring Chinese parents' beliefs and practices with their young children began when my son was about four years old. As an immigrant parent trained in New Zealand to be an early childhood teacher, many decisions I made for my children in their learning seemed to be from a Chinese cultural perspective, confronting Western cultural paradigms. I constructed, and continue to construct, my understanding of children's learning and development based on daily experiences as a Chinese mother with added knowledge gained from my training and my own early childhood experiences.

Unsupervised play is the strongest memory of my own childhood. In the early 1970s in a small town, Wuchuan in China, I spent most of the time playing with children in the neighbourhood in a natural environment with limited toys. At the

age of six, my parents taught me to count to 100 so that I could pass the primary school entry test. That is possibly the only purposeful academic learning experience throughout my early childhood. In the 1990s, however, I saw my sister's only child start childcare in China aged three and then at four, come back home with homework. She attended singing lessons every Sunday. At home, my sister taught her simple Chinese characters and numerals to prepare for primary school, as did most Chinese parents I knew. With the influence of the one-child policy in China, Chinese parents compete in providing more opportunities to maximise their children's educational outcomes by attending extracurricular activities such as piano or dancing classes. In the meantime, they expect their children to have a head start in academic learning before formal schooling (Wang, 2009). The result of this is that parents give great attention to preschoolers' academic learning.

In 2008, I started working as a teacher in an early childhood centre in Auckland. I noticed that some Chinese parents were concerned about their children's capability for communication with their peers. They were also keen to know what their children learn day by day in the centre. Some parents expect early childhood teachers to provide support to facilitate their children's reading and writing. Most of the time, we explained to parents that we do not directly teach reading and writing in early childhood but prepare a supportive environment comprising opportunities for children to attain literacy and numeracy knowledge. This did not satisfy all parents; for example, a Chinese parent from Malaysia said that his four-year-old son would have learned to read and write if he was in Malaysia.

Early childhood education in New Zealand

New Zealand early childhood education consists of a wide range of services which include kindergartens, education and care centres and play centres which are run as parent co-operatives. State funding is provided for the early childhood education services which are licensed and meet the early childhood regulations and the requirements of the New Zealand Ministry of Education. These early childhood programmes are regularly reviewed and monitored by the Educational Review Office (ERO) (May, 2001). Child-centred and play-

based pedagogy was developed and implemented in New Zealand early childhood education in the 1930s (May, 2001). Child-centred ideology has been a dominant theoretical framework which advocates that the child constructs knowledge through active exploring (Shonkoff & Meisels, 2000).

Te Whāriki (Ministry of Education, 1996), the New Zealand early childhood curriculum, was launched in 1996. This document addresses the significance of the sociocultural context in which children's learning is embedded. Children's learning cannot be effectively facilitated and extended apart from their experiences in homes, communities and cultures. Play, however, is acknowledged as a powerful learning approach for young children. Children's well-being, intelligence and social competences are fostered through a variety of play activities that they are involved in. Early childhood educators work towards establishing partnerships with parents. Early childhood professionals take on the role as facilitators by preparing an inviting environment and through teacher-child interactions in the play context (Ministry of Education, 1996).

Literacy and numeracy are two important learning areas outlined in Te Whāriki (Ministry of Education, 1996). In general, young children are expected to develop literacy and numeracy skills by participating in different types of play-based learning experiences, either child-initiated or planned by early childhood educators with educational purposes. Early childhood practitioners place emphasis on supporting young children's emergent literacy development by preparing a literacy-rich environment.

Emergent literacy refers to the development of reading and writing concepts and behaviours before conventional reading and writing (Adams, 1990). One of the learning outcomes of the Communication Strand in Te Whāriki (Ministry of Education, 1996, p. 76) recommends that early childhood education settings need to provide learning experiences through which children develop "a playful interest in repetitive sounds and words, aspects of language such as rhythm" and "increasing knowledge and skills, in both syntax and meaning, in at least one language". In relation to numeracy acquisition, skills in numbers, shapes and measurement, reasoning and problem solving are emphasised in early education. For example, children are expected to develop "skills in using the

counting system, and mathematical symbols and concepts, such as numbers, length, weight, volumes, shape and pattern, for meaningful and increasingly complex purposes” (Ministry of Education, 1996, p. 78). A supportive environment with a wide range of opportunities for children to develop literacy and numeracy skills is emphasised in New Zealand early childhood programmes.

The relationship between parental beliefs and children’s educational outcomes has been widely explored and theorised in the last few decades. Child development is, by and large, impacted by the home environment, which in turn is embedded in a broad cultural context (Harkness & Super, 1996). The relationship between parenting styles of a specific cultural group and the consequences of children’s school behaviours has been explored in literature and research (Brown & Iyengar, 2008; Melhuish et al., 2008; Chao, 1995; Goodnow & Collins, 1990). Parents influence their children’s learning and development through detailed day-to-day parenting decisions on organising their children’s time and home activities (Goodnow & Collins, 1990).

Many studies have explored Chinese parents’ educational expectations for their children and stress that Chinese culture is characterised as a Confucian-dominated culture (Li, 2004; Li, 2001; Chao, 1996; Chao, 1995; Chao, 1994). Confucius states: “Man is born with uprightness and all men are able to learn about the good and to be good” (Confucius, 2010). Men achieve self-perfection through persistent observation, learning and reflection throughout life (Wu, 1985). Education is highly valued in the Chinese tradition. Chinese immigrant parents maintain many traditional values and norms in their parenting (Chao, 1995). They are actively involved in their children’s education by providing constant support and monitoring. However, culture is a dynamic phenomenon (Rogoff, 1998), and Lau and Yeung (1996) warn that researchers should avoid being trapped in stereotypic thinking about Chinese beliefs, values and behaviours, and should take individual unique social circumstances into account in their research analysis. Furthermore, previous studies (Li, 2004; Li, 2001; Chao, 1996; Chao, 1995) place an emphasis on investigating Chinese parental influences on their children’s school achievements. Less attention, however, has been given specifically to parental involvement in young children’s literacy

and numeracy learning in early childhood. This small-scale study attempts to explore how Chinese immigrant parents perceive and facilitate their children's early literacy and numeracy development within the New Zealand context.

Clay (1991) suggests that early childhood educators in European heritage countries take the view that the main role of the teacher is to prepare a literacy-rich environment. In contrast, Li (2004) points out Chinese parents prepare their children for formal schooling from a young age by setting up learning tasks, assisting children's learning through formal instructions. Li's (2006) study suggests that discontinuities of learning experiences across home and early childhood centres may hinder children's learning. Understanding children's home learning enhances parent-teacher communications and facilitates children's learning more effectively. This research can contribute to a greater understanding of Chinese immigrant parents' perspectives of their children's learning, expectations of educational outcomes in early childhood and their home practices in relation to their children's literacy and numeracy acquisition.

Te Whāriki (Ministry of Education, 1996) recognises that children's learning is culturally mediated. Patterns of cultural values in practice vary from group to group. Various cultural models from diverse cultures may conflict in their contents (Carr & May, 1996). Holliday (1994) proposes that it is important for educators to recognise cultural differences and inform their pedagogy with a critical analysis of their own cultures. Diverse cultures where children are embedded should be respected, acknowledged, understood and valued by educators in the educational context (Ministry of Education, 1996). Moreover, culture reflects a pattern of values and behaviours from collective perspectives and sustains dynamic features (Hartley, 1995). Te Whāriki (Ministry of Education, 1996, p. 18) states that children should "gain a positive awareness of their own and other cultures" in early childhood education settings. Essentially, early childhood educators are required to work with parents as partners to extend children's learning from early childhood settings to the wider communities.

Central questions, significance and scope of research

This study explores Chinese immigrant parents' perceptions of their children's learning in early childhood, particularly literacy and numeracy. The sub-objectives of the research include:

- How do Chinese immigrant parents perceive children's learning in early childhood?
- How do Chinese immigrant parents perceive children's literacy and numeracy acquisition in early childhood?
- How do Chinese parents facilitate their children's early literacy and numeracy acquisition in the New Zealand context?

The significance of the study

New Zealand has been growing significantly as a multicultural society in the last few decades (Henderson, 2003). Increasing linguistic and cultural diversity brings new challenges for teachers to tailor their teaching practice to meet the needs of learners from diverse backgrounds.

The number of Chinese immigrants in New Zealand has dramatically increased since the 1990s. According to Statistics New Zealand (2006), Chinese New Zealanders account for 3.7% of the total population and Chinese is the largest Asian group in New Zealand (approx. 42% of all Asian New Zealanders). Chinese children's learning deserves attention in the education research field. With respect to children's literacy and numeracy acquisition in early childhood, the cultural differences in the learning styles of Chinese children and mainstream children, based upon Chinese and Western cultural beliefs, have been examined in many studies conducted in North America from a sociocultural perspective (Huntsinger, Jose, Larson, Krieg, & Shaligram, 2000; Huntsinger, Jose, Liaw, & Cjomg, 1997), whereas less attention has been given specifically to Chinese immigrant parents' subject knowledge of their children's literacy and numeracy learning experiences within the individual family context in New Zealand. To effectively facilitate and extend Chinese children's learning in early childhood settings, educators need to understand what literacy and numeracy knowledge that Chinese children bring to the educational context.

Therefore, this study will make a contribution to help educators make sense of how literacy and numeracy knowledge is valued and facilitated by Chinese immigrant parents in the early years.

The scope of the study

The scope of the study encompasses six Chinese immigrant parents. Qualitative research methodology was used in this research to explore the essence of life experiences of participants' children's learning experiences at home. Face-to-face interviews and short follow-up telephone interviews were applied to collect data. Six Chinese immigrant parents from local Chinese communities, with children who are or were involved in early childhood education in Auckland, voluntarily participated in the study. Participants' ages range from twenty to mid-thirties, and they have all lived in New Zealand for more than six years.

Outlining the chapters

Chapter 2: Literature review

Chinese immigrant parents' perceptions of young children's learning and facilitation of their children's literacy and numeracy acquisition at home are two major areas that need to be explored to answer the research questions. The literature review includes some traditional Chinese beliefs of education and frames their perspectives from a sociocultural perspective; Chinese beliefs of education and children's learning from the traditional Confucian perspective and impacts of immigration; and key knowledge of literacy and numeracy acquisition in early childhood.

Chapter 3: Methodology

This research seeks to answer the question "How do Chinese immigrant parents perceive their children's literacy and numeracy learning in early childhood?" A phenomenological approach was applied in this qualitative research to investigate people's perceptions of the world in detail (Benner, 1994). Morgan and Smircich (1980) describe man "as a social constructor, an actor, both a symbol creator and symbol user" (p. 492). Ontologically, this study is grounded in the cultural "objective knowledge" of Confucian philosophy which

predominates Chinese immigrant parents' beliefs, values and thoughts of learning. Human beings are "the agents through which knowledge is perceived or experienced" (Morgan & Smircich, 1980, p. 491). Chinese immigrant parents also actively construct their beliefs and values through ongoing interactions with other social groups in New Zealand. Epistemologically, this research attempts to explore the phenomenon of participants' experiences and gain insight into the essence of their experience. Qualitative research methodology was applied according to the nature of the study, which enabled me to deeply explore the participants' practice. Data were collected through face-to-face individual interviews and follow-up telephone interviews.

Chapter 4: Findings

The key findings from interviews are presented in this chapter. The participants explored the research topic from different perspectives through telling their life stories and sharing their insight and perspectives. The findings are analysed and grouped into common themes including the areas of parental beliefs of children's learning and education in New Zealand; parental involvement in their children's literacy and numeracy learning; key factors of children's literacy and numeracy learning development in early childhood; children's literacy and numeracy learning experiences in early childhood education settings; and being bilingual.

Chapter 5: Discussion

Participants' views on the research question are revealed through the findings of the study. As a relatively homogeneous cultural group, the participants shared some common beliefs of education and learning which are grounded in traditional Confucian ideology. However, differences are evident in their strategies to support children's learning at home. Some participants used the traditional features of Chinese parenting and implemented traditional Chinese learning styles, such as formal instructional learning. Other parents held a strong belief that young children learn through play and child-initiated activities, which they felt that is a more appropriate approach in the New Zealand context.

Chapter 6: Conclusion

The findings of the research are briefly summarised in this chapter. In common with small-scale and interpretive studies, this study attempts to articulate the relevance of Chinese parents' cultural beliefs and their practices in relation to their children's early learning. This chapter provides insight into Chinese immigrant children's literacy and numeracy learning activities at home. This is followed by discussion of the strengths and limitations of the study. The potential contribution that the current study could make is to add to the literature on Chinese parents' conceptions of early learning. This research may inform early childhood educators to acknowledge the knowledge and experiences that Chinese children have gained at home and enhance their understanding of Chinese children's learning from their unique family contexts. The foremost relevance of the research is the importance of acknowledging cultural patterns of Chinese parents' value systems of education, and the considerable differences of family pedagogy and home practices that exist within families from ostensibly the same cultural background. Generalising children's learning according to broad cultural frames should be avoided, but there are insights which can contribute to understanding.

In the following chapter, the relevant literature on parental beliefs in children's learning and children's literacy and numeracy acquisition in early childhood are critically reviewed and analysed to provide a broad theoretical background of the study.

Chapter Two: Literature review

The literature review focuses on two key areas: literacy and numeracy in early childhood; and Chinese immigrant parents' perceptions of children's learning. Scholarly and academic views and studies of young children's literacy and numeracy development and Chinese parents' insight into education and learning from the traditional Confucian perspectives are presented and critically analysed in this review.

Vygotsky (1978) proposes that children's learning is rooted in their sociocultural contexts. A child's literacy and numeracy learning is considerably influenced by his/her life experiences. Very young children start to construct and understand the world through language (Adams, 1990), and from birth they are learning about the things that humans have come to define as mathematics (Campbell & Mandel, 1990). Bronfenbrenner (1979) states that a child's development is profoundly impacted by events which occur in or out of their present settings. Children's learning correlates to home, community, culture and society. Literacy and numeracy development begins in earliest childhood and continues throughout life (Nicholson, 2002). Young children participate in various literacy and numeracy learning experiences in their homes, communities and educational settings. Thus, sociocultural factors significantly contribute to children's literacy and numeracy development (Whitehead, 2002; Ma, 1999).

This study attempts to investigate how Chinese immigrant parents perceive and facilitate their children's literacy and numeracy learning in early childhood within the Aotearoa New Zealand context. Important factors contributing to children's literacy and numeracy learning are examined in the literature review which is structured in the following sections:

- Diversity in Aotearoa New Zealand
- Chinese immigrant parents' beliefs of children's learning
- Literacy and numeracy acquisition in the Aotearoa New Zealand context

- Literacy development in early childhood
- Numeracy acquisition in early childhood
- Literacy and numeracy learning in educational settings

Diversity in New Zealand

Immigration has become one of the major forces shaping New Zealand society (Ip, 2003). A large number of Asian immigrants move to Western countries and start their families in the new country. New Zealand has grown into a multicultural society (Henderson, 2003). Increasing diversity in ethnicity, particularly an increasing Asian group, is one of the features of current New Zealand society. Chinese New Zealanders account for 3.7% of the total population and Chinese is the largest Asian group in New Zealand (Statistics New Zealand, 2006). New Zealand children are more ethnically diverse than adults: in the 2001 Census, 18% of children are identified as belonging to more than one ethnic group compared with 6% of adults (Statistics New Zealand, 2001). Those figures indicate more children from Asian backgrounds are involved in the New Zealand educational system, which contributes to the rapid increase of ethnic and linguistic diversity in educational institutions.

Additionally, more children from English as second-language backgrounds attend ESOL: (English for Speakers of Other Languages) programmes to seek support to improve their English. The number of students who are involved in ESOL increased from 20,607 (16,799 primary students) to 33,138 (26,225 primary) from the year 2000 to 2009 (Ministry of Education, 2010). How to effectively support children coming from English as second-language backgrounds to achieve at school draws parents, educators and policy-maker's attention (Nicholson, 2002).

Chinese perceptions of learning

A majority of new Chinese immigrants who are well educated, already middle-class professionals in their home country, choose to immigrate to Western countries to look for alternative lifestyles and better education opportunities for their children (Ip, 2003). Nonetheless, inevitable changes of values and beliefs occur resulting from immigration. Generally, Chinese immigrant parents still

share similar beliefs and values in terms of child rearing and education grounded in Confucian philosophy (Siegler & Mu, 2008; Zhang, Ollila, & Harvey, 1998). Education is highly valued and supported within Chinese families. A growing body of studies sheds light on Chinese immigrant children's optimal school performance within the Western context, such as the United States and Canada (Chao, 1996; Chao, 2001; Francis & Archer, 2005). The research underpinning Chinese children's school success in those countries has mainly emerged from two themes: Chinese parents having high educational expectations for their children (Li, 2006; Chao, 1995) and parents being actively involved in their children's learning at home (Ji & Koblinsky, 2009).

Child-rearing goals vary among cultures (Goodnow & Collins, 1990). Parental beliefs of appropriate parenting styles influence children's development and learning (Harkness and Super, 1996). These expectations, ideas and beliefs comprise particular cultural values and play an important role in guiding parents' behaviours (Goodnow & Collins, 1990). Acknowledgement of the concept of family in Chinese culture is essential to understand the role that Chinese parents play in children's learning and development. Hartley (1995) asserts that providing the necessary resources for a younger generation's growth, and achieving social expectations and responsibilities, is a core value of Chinese family beliefs.

Chinese immigrant parents maintain the traditional values of sacrificing self. The principle of working hard to provide support for their children's achievement is well grounded in Chinese tradition (Chao, 1995). Children's education is a family matter for Chinese (Wang, Stevens, Chen, & Qian, 1999). Many people believe that an individual's success in society depends on how well parents perform their role (Chao, 1995). Chinese parents take their responsibilities to facilitate children's success seriously, particularly at school. A majority of researchers investigate the reasons why Chinese students outperform their peers in the United States, and there is evidence to show that the primary reason for Chinese children's success at school is their parents' high expectation for their children's school achievement, based around the Confucian perspective of education in a person's life (Brown & Iyengar, 2008;

Chao, 1996; Chao, 1995). Chinese parents are less accepting of their children's moderate school performance than the European parents (Chao, 1996).

Chinese immigrant parents preserve many traditional features of parenting values and practices (Chao, 2001; Wu, 1985). Their perceptions of the ideal child are associated with traditional values in Chinese culture: respect for elders, good manners, optimal academic outcomes, and self-discipline (Chao, 1995). Chinese parents' belief in school achievement reveals the Confucian value orientation of education (Kinlaw, Kurtz-Costes & Goldman-Fraser, 2001). Academic achievement involves the process of self-perfection and fulfilment of family obligation. Chao (2001) states that family obligations are core values of Confucian beliefs in education. Chinese younger generations take the responsibility of maintaining and furthering their families' reputations. Children's scholarly achievement honours the whole family and their ancestors (Wu, 1985).

In line with the influences of traditional values of education rooted in Chinese culture, Chinese immigrants expect their children to gain security from success in education. Outstanding scholarly achievement is pursued by Chinese because it may bring financial security and family prosperity (Chao, 1996). This purpose is closely associated with immigration. In general, however, immigration is a stressful event (Ip, 2003). Chinese immigrants have experienced difficulties when they start settling in a new country: some of these are related to unrecognised qualifications, language barriers and less job opportunities (Henderson, 2003). With experiences of the disadvantages of being a member of a minority group, Chinese parents believe that their children should perform better than their mainstream peers to have a chance of succeeding in society (Li, 2004). Consequently, they conduct educational activities at home to maximise their children's school success.

In accordance with Confucian beliefs, children build up their "self concept" through moral rules, obligation and regulation by means of interactions in a group (Brown & Iyengar, 2008; Li & Wang, 2004). Socialisation has ranked as a top priority in children's education by Chinese parents; immigrant parents, especially, expect their children to integrate in the host country successfully. Li

and Wang (2004) investigated a group of Chinese immigrant parents' and American parents' expectations of their children's school transition. Chinese American parenting reflects the impact of collectivistic Chinese culture on their parental expectations of their children. They emphasise the importance of integration into the social group for their children. Goodnow and Collins (1990), however, argue that it will be misleading to classify cultures only on a general level of individualism and collectivism without considering the individual representations of cultural values. Li (2001) suggests that Chinese immigrant parents in Canada share some common beliefs of traditional Chinese values and beliefs in education but also develop some understandings of the openness of child development which is valued in Western education. Chinese immigrants adapt some of the western cultural beliefs to enhance their children's social acculturation (Li, 2004).

Li and Wang (2004) advise that children's academic excellence enhances peer acceptance and earns the respect of peers. In other words, excellent school performance improves children's school relationships and facilitates children's social adjustment. In Confucian terms, scholarly achievement indicates a person's success (Wu, 1985). Achieving at school is an effective means for Chinese learners to seek respect from others (Chen et al., 2004). This study suggests that social children seem to achieve higher with their academic learning, while shy or socially inhibited children are more likely to perform poorly in school. Furthermore, children's academic difficulties may lead to frustration, which negatively impacts on their social behaviours. Chen, Rubin and Li (1997) note that "academic achievement may determine social prestige in the peer group and consistently affect self-image" (p. 519). In turn, children experiencing academic difficulties may obtain less respect among peers and develop negative feelings about their self-esteem.

Chinese parents' expectation for their children is associated with the children's age. Age is one of the boundaries for Chinese parents to adjust their expectations. They are lenient to younger children and more strictly disciplined with and hold higher expectations for the older children (Chuang & Su, 2009). However, the single child policy in China has had a great impact on the Chinese parent-child relationship. Many Chinese parents treasure their only child and

deal with their children's misbehaviour with supplication rather than punishment (Lim & Lim, 2003). Xu, Farver, Zhang, Zeng, Yu and Cai's (2005) study indicates there is no difference in the perception of affective expression among Chinese parents, immigrant parents and Caucasian-American parents with children from three to eight years old. Additionally, this study indicates that Chinese parents show similar warmth to their children in their parenting, and their behaviours that display warmth to their children are not closely correlated to their children's age.

Chinese learning styles

Chinese place more emphasis on the role of external influences on a child's development than on inner ability (Chao, 1996; Li, 2001). Confucians believe that the environment substantially shapes a child's development. This is illustrated in the story of "The mother of Mencius (372–289 BC), a famous Confucian, "chose a neighbourhood" (Wang, 2001). This famous story is about the mother of Mencius who moved her house three times and eventually chose a school as her neighbourhood because she believed that the environment would play a significant role in Mencius's development. This is similar to sociocultural theory which stresses that children construct their knowledge through interactions with their surroundings (Vygotsky, 1978).

With regard to traditional Chinese beliefs of education and learning, efforts are viewed as essential in the Chinese learner's scholarly achievement. Chinese parents hold a strong belief in hard work and effort (Li, 2003). Studies conducted within Western contexts, such as North America and the United Kingdom, discovered that Chinese students spend more time on study (Li, 2006; Francis & Archer, 2005; Chao, 1996). Chao (1996) points out that compared with European parents, Chinese parents believe that effort is the key factor leading to better school performance. To encourage children to put more effort into study, Chinese parents not only pay close attention to how well or how much their children have learned, but also teach their children to love learning (Li, 2004). Love of learning is the largest dimension of seeking knowledge. Chinese parents believe that learning becomes self-motivated and self-regulated if children have a desire to learn (Li, 2001). A considerable body

of literature has grown around the notion that optimal academic performance is tied to the degree of self-regulation and whether the learner is willing to practise their work (Li, 2003).

Persistence in learning serves the purpose of self-perfection, according to Confucius. By contrast, mental independence and creative learning are emphasised in Western culture (Li, 2003). Children in American preschools are socialised upon their interests and curiosity, how long the child stays on an activity depends on whether she/he has any interest in the activity. Conversely, in the Japanese culture of learning, similar to Chinese culture, children are encouraged to stay longer on one task and obtain a better learning outcome (Hess & Azuma, 1991). Comparing two learning styles in both Western and Eastern culture, learning in Eastern cultures stresses the importance of persistence. In contrast, in Western countries, preschool children have ownership of their participation, and their individualities in the learning process is acknowledged and valued by adults (Goodnow & Collins, 1990). Li (2003) and Francis and Archer (2005) pointed out that Chinese learners have a strong commitment to practice and persistence, which is viewed as one of the key factors of success. It is believed that persistent memorisation and practice in a learning process contributes to a learner's later capability to question and modify the original knowledge (Li, 2003).

As one of the important aspects of parenting, Chinese parents are engaged in children's learning through training (Wu, 1985). From the Confucian perspective, one can go beyond what nature has given (Wu, 1985). Hard work is stressed rather than inherent talent (Kinlaw, Kurtz-Costes, & Goldman-Fraser, 2001). Chinese parents train their children to work hard through scheduling their time for study and conducting educational activities at home on a daily basis.

Chinese parents' attempts to control their children's learning are motivated by their intense concern for their children to be successful, particularly in school (Chao, 2001). However, training eventually aims to establish a learning habit. "Men's natures are alike. It is their habits that carry them far apart" (Confucius, 2010). Chinese mothers train their children to work hard and develop a good

study habit (Chao, 1996). The purpose of developing a good study habit is to enhance self-control so they are eventually able to work on their own (Lim & Lim, 2003). The increase in children's self-control is explained as habit formation that may lower children's stress related to self-control behaviour (Xu, Farver, Zhang, Zeng, Yu & Cai, 2005). Training children fairly early to work very hard and be disciplined is one way to foster their self-motivation in learning (Chao, 1994).

Furthermore, skill-based training among Chinese parents has been noticed by several scholars (Chao, 1995; Li, 2001; Wang, Bernas, and Eberhard, 2002). Training in Chinese learning focuses on gaining skills that corresponded to the keen competition in gaining access to higher educational opportunities in China (Ng, 2003). The orientation of skills acquisition in learning is based upon the understanding that academic learning should focus on practical outcomes and outperforming others (Ng, 2003). To respond to keen competition and high pressure for achievement, Chinese parents are extensively involved in their children's learning in order to enhance their children's school performance, by supervising them to complete homework and attending extracurricular activities such as maths and English classes out of school (Zhang, Ollila, & Harvey, 1998). However, Ng (2003) suggests that "Chinese children's personal learning interest, enjoyment and improvement are not as valued as learning for high achievement" (p. 3).

Early childhood education in China

Western child development philosophy has had a large impact on contemporary Chinese early childhood education since 1989 (Wang, 2009). The China Ministry of Education states that Chinese early childhood educators should make progress in implementing Western ideas of "child development, integrated curriculum, active learning, attention to individual differences, group functioning, and respectful relationships between teacher and child" (Corter, Janmohammed, Zhang, & Bertrand, 2006, p. 5). However, it has been acknowledged that it has been a problem to implement those ideas because of the influences of conventional Chinese educational practices. Structured teaching is evident in Chinese early childhood programmes, and teachers are mainly working towards

achieving better learning goals rather than extending individual children's interests (Ng, 2003).

Emphasis is placed on Chinese children learning art activities before the age of five. Art activities are ranked as high priority in children's early learning by Chinese parents. Children attend piano, dancing and drawing lessons to develop the sensitivity of beauty through musical and visual art experiences from a younger age (Vaughan, 1993). Chinese parents' attitudes to art are grounded in a traditional value orientation of art in education. Originally, music was seen as a quality that Confucian scholars should possess (Bai, 2005). Confucians believe that music fundamentally shapes and nurtures one's personality. The musical activities were gradually assimilated into education after Wang Yang Ming (1472–1528) proposed that children naturally love to run, jump and shout. Music and physical activities are valued as enjoyable experiences for children, and they appropriately channel their energy for shouting, running and jumping in a more educational way (Bai, 2005).

Play is noted as a significant contribution to young children's learning in Western countries (Piaget, 1962; Vygotsky, 1978; Ministry of Education, 1996). Examining the meaning of play in traditional Chinese norms and values contributes to better understandings of how Chinese view play in children's learning processes, especially in early childhood. Historically, play and intellectual development have been separated in traditional Chinese education, according to Confucian philosophy (Wing, 1995). The purpose of play is mainly for relaxation and enjoyment (Bai, 2005). Wing (1995) suggests that games such as chess and music are referred to as part of play for cultivating sentiment from a Confucian perspective. Play is less valued as a medium through which children construct their learning (Bai, 2005). Moreover, Chinese early childhood educators accept the value of play in children's learning and development, yet that value has not been translated into teaching practice because of parent's high expectations for their children's academic learning in early education (Corter et al., 2006).

Music and visual art are important learning areas specified in China's early childhood curriculum (Wang & Mao, 1996). Children are engaged in many

teacher-led music and visual art activities in Chinese kindergarten (Vaughan, 1993). The boundary existing between play and work is not very clear in Chinese early childhood education; teachers tend to integrate work into play, but Wing's (1995) study suggests that most preschoolers perceive teacher-led activities as work not play. On the other hand, Wing (1995) suggests that Chinese parents view play as more associated with those activities for relaxation and enjoyment rather than skill oriented or educational. Traditional Chinese beliefs of play are challenged by the contemporary Western child development approach. Chinese parents start to recognise that young children learn through play, but they believe that play should be more educational. The study conducted by Parmar, Harkness and Super (2004) found that, compared with European parents, Chinese parents choose toys with educational purposes for their children rather than for amusement or fun.

Mainland Chinese children start primary school at age six. The emphasis of training shifts to academic work after children turn five. Chinese parents expect their children to have a head start before formal schooling; academic work, including literacy and numeracy, is given major emphasis after children reach the age of five. Teacher-directed and structured learning with explicit learning goals is evident in classroom practice (Vaughan, 1993; Wang & Mao, 1996). Moreover, Chinese parents' and teachers' high expectations for preschool children's academic achievement are associated with the school system. In China, early childhood education is located in the primary school system (Vaughan, 1993). Learning experiences in early childhood, particularly for children who are starting school, relate to primary school expectations for school-age children. Having access to the key schools (better educational resources ranked in the China school system) that implement competitive and selective entry becomes one of the driving forces for Chinese children to start academic learning early (Wang & Mao, 1996).

Dynamic culture

As to the traditional Chinese parent-child relationship, children are expected to show great respect and obedience to their parents (Wu, 1985). According to the ancient Chinese classical work *Di Zi Gui* (Standards for being a good student

and child), the first principle for pupils is filial piety. "When my parents call me, I will answer them right away. When they ask me to do something, I will do it quickly" (Li, 2005, p. 21). 'San Zi Jing' (The Three-Character Classic), another classical work for young children, stresses the importance of parents' and teachers' instruction in children's learning from Confucian perspectives. For example, "To feed without teaching is the father's fault. To teach without severity is the teacher's laziness" (Wang, 2010). Chinese parents are actively involved in children's learning to offer support and supervision. Lim and Lim (2003) propose that Chinese parenting demonstrates that Chinese parents are more likely to be tutors at home with their children and they interact with their preschool children in more formal and didactic ways. Similarly, Chao (1994) proposes that Chinese parents take the main role of caretakers and teachers.

Parental beliefs are constructed in the process of dynamic interactions with other cultural groups and are influenced by norms and values of the respective culture and the culture of other social groups (Rogoff, 2003). Immigration results in changes in traditional values and beliefs. Chinese immigrant parents alter some traditional cultural values based on the comparison of their lives before and after immigration. Xu, Farver, Zhang, Zeng, Yu and Cai's (2005) study suggests that Chinese immigrant parents take children's individuality into account and respect children's individual needs, both of which are emphasised in Western child-rearing. Li's (2001) study notes that new Chinese immigrants in Canada appreciate the openness of education and believe that solely emphasising academic learning is inappropriate. Consistent with Li's (2001) study, Liao's (2007) research conducted in New Zealand asserts that in the early school years, the children's emotional well-being is more valued by Chinese parents than academic performance.

Furthermore, immigrants challenge certain practices of traditional cultural beliefs after they immigrate to the new country. Alternative traditional values and beliefs inevitably occur. Research (Li, 2001; Li & Wang, 2004) indicates that parental control is less important than independence and self-reliance in Chinese immigrant families. Consistent with this view, Chuang and Su (2009) examined the power relationship of Chinese American families, and the findings reveal that Chinese parents shift their role from dictators to responders to their

children's needs. In addition, young Chinese immigrant parents allow their children to have input in decision-making and provide suggestions rather than directives (Lim & Lim, 2003).

Maintenance of home language

Ethnic language is an essential aspect in reflecting an ethnic group's identity (Luo & Wiseman, 2000). It is a challenge for immigrant families to develop a secure understanding of themselves as ethnic individuals within a different cultural and social context (Luo & Wiseman, 2000; Ip, 2003). Immigrant parents believe that keeping their native language alive is fundamental to maintaining their cultural identities. For the first generation of migrants, Chinese parents expect their children to learn Chinese because that is the primary way to be Chinese (Li, 2001). Undoubtedly, family is a primary agent in supporting children and other family members to preserve their home language. In order to maintain and develop Chinese immigrant children's heritage identity, Chinese parents generally teach their children Chinese at home (Zhang & Slaughter-Defoe, 2009).

With exposure to the dominant culture and language, immigrant families are under substantial pressure to abandon their first language to embrace the mainstream culture (Zhang & Slaughter-Defoe, 2009). For young bilingual children the retention of the home language or dialect will likely be inhibited when they are exposed to dominant, English-speaking environments, such as childcare centres and schools, without sufficient support for home language or dialect (Clark, 2000). Furthermore, immigrant parents are concerned that their children may be disadvantaged in education caused by language deficits or cultural differences. Luo and Wiseman (2000) advise that Chinese parents have realised that acquiring sufficient English is critical for their children to achieve at school and succeed in society. Therefore, Chinese immigrant children are expected to be competent in both languages.

Early literacy and numeracy acquisition

Government expectation

Lifting New Zealand literacy and numeracy achievement has been given priority in New Zealand schools to equip students with skills and succeed in society (Ministry of Education, 2007). Numeracy Development Projects (NDP) have placed an emphasis on developing teachers' professional knowledge in teaching mathematics to improve students' maths achievement in primary schools (Thomas & Tagg, 2004). Primary teachers are working to identify individual children's mathematical learning stages and provide appropriate support. In 2009, New Zealand National Standards (Ministry of Education, 2009) were launched to support and assess students' reading, writing and mathematics for years one to eight. National Standards in reading, writing and mathematics aim to "identify students' learning processes, inform teachers and parents of students' processes" in the three areas and provide support for students to achieve (p. 13). The National Standards provide explicit mathematics and literacy criteria for students to achieve in each grade.

Children's learning is a continuous process across home, school and communities. Young children have attained various literacy and numeracy skills before they start formal schooling, and the previous learning experiences considerably influence and predict their later learning (Aubrey, 1993; Adams, 1990). Effective and sufficient facilitation in children's literacy and numeracy acquisition in early childhood contributes positively to building up children's strength and confidence in later literacy and mathematics learning (Rohl, 2006; Headington, 2001).

It is evident that literacy and numeracy learning in early childhood has been emphasised in New Zealand education. The New Zealand early childhood curriculum Te Whāriki (Ministry of Education, 1996) has substantial outlines in both literacy and numeracy learning. And literacy and numeracy learning are specified in the New Zealand Curriculum (Ministry of Education, 2007). The Educational Review Office (2009) suggests that literacy learning experiences should be provided for children in the everyday programme in New Zealand

early childhood education settings. There should be a clear focus on literacy in early childhood daily planning.

The child-centred and play-based approach has been widely accepted and implemented in the New Zealand early childhood sector (Carr & May, 1996). Children's literacy and numeracy learning is fostered by a supportive environment which encourages creativity and exploration (Ministry of Education, 1996). Children are empowered to freely explore and construct their learning through engaging with a variety of learning experiences. However, May (2001) points out that free-play oriented early childhood philosophy, which is popular in New Zealand, has been questioned by those who saw it as too relaxed for formal schooling. McLachlan, Carvalho, De Lautour, & Kumar (2006) found that insufficient teacher scaffolding through teacher-child interactions results in poor literacy learning practices in some early childhood programmes. Correspondingly, adult instruction significantly contributes to early literacy acquisition.

School readiness

Bearing in mind that children's successful transition from early childhood settings to formal schooling is established upon understanding culturally important academic and social skills and literacy and numeracy are essential skills for children to achieve at school (Nicholson, 2002). Literature suggests that children's early literacy and numeracy experiences at home or in early childhood education settings potentially affect their school readiness (Aubrey, 1993). As for the transition from early childhood to primary schools, primary teachers expect early childhood teachers to prepare children with basic literacy and numeracy skills to assist their transition (Peters, 2000).

Nicholson (2002) suggests that children who lack the ability to read and write in their early school years are likely to stay behind their peers throughout schooling. Literacy and numeracy have been placed as the highest priority in the first years of formal schooling. Similarly, Young-Loveridge (1989) suggests that children differ in their mathematics skills when they enter primary school and the difference increases by grade. Moreover, literacy and numeracy are

inter-related skills. Literacy acquisition contributes to a learner's oral language development and the ability to comprehend and understand written content, and those skills are relevant to other subject learning, such as mathematics. Winsor (2007) suggests that being able to read and understand the content is crucial for children to make progress in learning mathematics.

English as second language

As language is central to learning and English is the medium for most learning in the New Zealand Curriculum, the importance of literacy in English cannot be overstated.

(Ministry of Education, 2007, p. 16)

Children with English as an additional language or children coming from low-income families are assumed to be disadvantaged in developing literacy skills. Nicholson (2002) proposes that some children from low-income families are left behind in pre-reading skills and take the first year of schooling to reach the level where children from middle-income families are at school entry. Literature suggests that children from low-income families struggle with their reading and writing (Cairnery, 2002). However, socio-economic circumstances and linguistic backgrounds are not the only indicator of a child's literacy development. Gee (2002) suggests that parents' value of literacy is associated positively with children's literacy achievement. Children from low-income families still achieve in reading and writing as long as their parents place a high value on literacy activities in their everyday life experiences.

Cairnery (2002) suggests that English as second language learners experience significant challenges in moving across home, school and community literacy contexts. Clark (2000) states: "Almost all children become fluent in their first language; this kind of guarantee is not an automatic right to the acquisition of a second language" (p. 184). One of the major causes of educational difficulties for learners from minority language backgrounds is the task of code-switching from the language of the home to the language of school settings (Okagaki & Diamond, 2000). Compared with the deficit model for English as second language learners, some scholars argue that language learners can transfer the strategies and knowledge they learned in their first language to literacy

acquisition in a second language. Whitehead (2002) asserts that speaking two or more languages advances children's language development. In addition, Martine (1999) indicates that young English learners are competent to make sense of written symbols while they are working on becoming fluent English speakers. Similarly, Saracho and Spodek (2002) point out that reading and writing development in the early stages may surpass children's speaking in their second language.

Early literacy development

Literacy is underpinned and defined from different theoretical perspectives. Most definitions of literacy place a focus on the ability to read and write with the conventional system of written symbols of one or more language (Whitehead, 2002). Adams (1990) points out that literacy is more connected with an aspect of living in a community rather than a business of schooling. Clay (1991) proposes that young children's literacy acquisition involves a diverse range of language experiences that children engage in. Early literacy experiences should focus on child-centred learning experiences which are fostered by a supportive environment. A large body of literature addresses children's "emergent literacy" development in early childhood (e.g. Whitehead, 2002; Clay, 1991). It has been recognised that young children begin to make sense of print and develop strategies to understand the print world. Literacy acquisition has been acknowledged as a broader continuum, beginning in early childhood, and wider than formal reading and writing. Nevertheless, Li (2006) argues that emergent literacy practices are mostly investigated in Western and middle-class communities. Rogoff (1998) points out that children construct their collaborative learning within three planes of sociocultural contexts (cultural, interpersonal and personal). Literacy acquisition is largely influenced by home, community and culture (Adams, 1990). It must be acknowledged that different cultural groups may engage in various literacy learning experiences (Ramey & Famey, 1999).

Literacy is a social practice, and a supportive environment significantly contributes to a child's literacy development in the early years (Adams, 1990). Children learn to explore the meaning of print on labels and signs if they are exposed to a print-rich environment. A literacy-rich environment is essential to

support children's literacy development in the early years. It has been found that a print-rich environment enhances the frequency of children's literacy activities. Whitehead (2002) indicates that young children build up their vocabularies faster when their senses are stimulated through seeing and listening. Children are curious to acquire new words during play when learning resources are in colours, sound and various textures.

However, Gee (2002) points out that a literacy-rich environment is insufficient to support children's literacy development without adequate adult guidance through teacher-child interactions. Teacher instructions enhance children's literacy learning remarkably. Clay (1991) proposes that language development significantly correlates with the ability to read and write but sentence patterns of written language and oral language differ. Rohl (2006) argues that written language is a culturally transmitted artefact, while spoken language can be automatically acquired. From this perspective, reading and writing particularly need to be taught. Children need to acquire some fundamental knowledge, such as the alphabet, before they are able to read and write.

Alphabet knowledge is essential in early literacy development (Rohl 2006). An alphabetic writing system, in which letters (graphemes) or groups of letters represent the distinctive sounds (phonemes) of the language, applies in English (Rohl, 2006). Alphabet letters, phonemic awareness and vocabulary are three primary elements in developing early literacy. First, being familiar with alphabet letters: there is growing evidence which shows that being familiar with the names of alphabet letters is one of the indicators of successful early reading (Rohl, 2006). Children learn to recognise the names, shapes and sounds of letters gradually. Secondly, it is important to establish phonemic awareness: the ability to associate sound with letters. Phonemic awareness contributes positively to children's English progression. This also applies to students whose first language is logography, such as Chinese (Strauss & Altwerger, 2007). Thirdly, expanding vocabularies: vocabulary knowledge is crucial to reading comprehension in all language learners. Okagaki and Diamond (2000) found that unfamiliar English vocabulary was the major factor that adversely affects reading test performance for English learners.

Nevertheless, Strauss and Altwerger (2007) argue that phonics is not a stand-alone approach to facilitate children's reading and writing – children's literacy skills should be acquired in a whole language environment. Intensive attention has been given to phonics instruction in classroom practice in the last decade (Rohl, 2006). Gee (2002) suggests that writing is a cultural and artificial representation of language. To acquire the writing skill, children must possess the skill of decoding the meaning of the written content that is primarily gained from a meaning-centred and whole language-based approach.

Pre-reading and pre-writing skills

Children are developing pre-reading and pre-writing skills from an early age. Emergent literacy is a primary process that children are actively engaged in, in reading and writing. Whitehead (2002) proposes that emergent literacy is a process in which children construct the functions of print or symbols based on their experiences and interactions with adults. A child's initial exploration in writing emerges from mark-making and drawing. Mark-making involves both creativity and communication which are important components of literacy. Accordingly, young children's first investigation of print, and their attempts to use written symbols, is a real process of literacy which comprises their understanding of the content and motivations to express themselves in the written form (Adams, 1990).

Children's play makes a great contribution to their cognitive, social, emotional and linguistic development. Young children explore print and develop skills to make sense of print primarily through play (Whitehead, 2002). Vygotsky (1978) regards play as a leading activity for promoting a child's development, and he believes that play creates a zone of proximal development of the child. Play enhances children's language development and helps them extend their language use through interacting with peers in play languages. Socio-dramatic play places a high demand on children's verbal communication skills and promotes children's linguistic ability within the play context (Adams, 1990). Children are offered valuable opportunities for language learning through negotiations of rules when they play with one or more peers.

Influence of home and culture

Abundant research and literature has identified that the parent plays a significant role in children's learning (Ji & Koblinsky, 2009; Brown & Iyengar, 2008). Parents may have a great impact on their children's learning because they believe it is so (Cairnery, 2002). Parental beliefs are considered an important factor which is thought to influence their children's educational outcomes (Adams, 1990). Parents are engaged in their children's learning and help them acquire certain educational skills according to their sociocultural identities. Siegler and Mu (2008) propose that parents introduce activities which foster skill attainment at an earlier age to their children than those who do not expect such attainment. Adams (1990) suggests there is a positive relationship between children's language development and the age of the child when those activities are introduced by their parents.

Gee (2002) states that literacy development is a fundamental social process that occurs through interactions between children and other people within their socio-contexts. Parental involvement in children's literacy acquisition has been acknowledged in a large body of literature (Li, 2006, Whitehead, 2002, Adams, 1990). Children's literacy development is positively associated with frequent interactions with the environment and with experienced adults. Social constructivists suggest families are a fund of knowledge, which by and large impacts on children's early literacy development. Young children begin to develop literacy knowledge from their first and most influential intermediate environment, their home setting (Adams, 1990). They initially build up their interests and attitudes towards literacy primarily from home.

The home environment which children are exposed to reveals parents' attitudes towards literacy. A supportive home literacy environment is associated with higher performance on testing of vocabulary and reading (Whitehead, 2002). Parents modelling reading and writing at home, providing resources, sharing story reading with children and engaging children through interactions are all attributive elements of a supportive literacy environment at home (Whitehead, 2002). Gee (2002) explains the main cause of the linguistic disadvantages of some low-income children is that parents place low value on literacy;

consequently, limited literacy resources and reluctant use of literacy skills is evident in those families.

Cultural difference in literacy learning

Vygotsky's (1978) child development theory is inherently grounded in nature and culture. According to sociocultural theory, children construct literacy through interaction with their environments, and learning is shaped by social and cultural practices. Cultural differences in language acquisition are identified in children's language learning in the early stages. Very young children begin to explore the meaning of print through play, from a Western perspective. Mark-making and creative writing have been acknowledged as valuable literacy learning experiences in the early years (Clay, 1991).

By contrast, driven by East Asian examination-oriented education systems, teachers and parents in China are more likely to place value on correctness, rote learning and copying of established texts in literacy acquisition (Ng, 2003). Academic learning focuses on knowledge preserving and reproduction in China (Li, 2001). Memorising words on picture cards and reciting poems are widely used for young Chinese children to build their vocabulary (Zhang et al, 1998).

Cultural differences between home and school can further complicate the language and literacy learning that these children need. Adams (1990) suggests that language development is strongly influenced by the home and community in which a child is brought up. The language that children learn at home correlates to the culture of their communities and beyond communities. However, what is valued in one cultural context may not necessarily be valued in another. For instance, Chinese parents perceive reading to children is beneficial to their literacy development, just as much as European parents do (Huntsinger et al., 2000), but cultural differences still exist in the procedure of the same activity. Ji and Koblinsky (2009) found that Chinese parents see little value in parent-child interaction through book reading. They pay close attention to children's memorisation of text and comprehension of the story. Children are asked to answer questions after they have shared a story with parents. The importance of memorisation and understanding is addressed by the Chinese parents. With respect to alphabet acquisition, Chinese children rely largely on a

logographic approach to memorise and visualise letter names or words. The relationship between letters and the letter sounds were not emphasised (Chang & Treiman, 2003). Additionally, evidence from Ran's (2000) study conducted in a British context reveals that Chinese mothers emphasise accuracy and perfect scores in literacy learning. Shek and Chan (1999) point out that Chinese parents are strict with children's handwriting in the beginning, and children are asked to write neatly.

Oral language and literacy

Children's early literacy learning is built upon their oral language acquisition to a great extent. Whitehead (2002) advises that the role of oral language facilitating a child's early reading acquisition has not been fully recognised by parents and early childhood educators. Children's oral language is greatly influenced by their parental support and encouragement. Parent-child interactions contribute to children's oral language development and offer children opportunities to build up their vocabulary. Speaking is about sharing language (Whitehead, 2002). Parents from non-mainstream cultures may have different patterns of interactions with their children. The language they use at home might not be English. A growing body of studies has examined the co-relationship between oral language proficiency and literacy for English as second language learners, particularly in younger children (Clark, 2000; Saracho & Spodek, 2002). The study by Clark (2000), however, suggests that oral proficiency alone is not enough to indicate children's readiness to learn reading and writing. There is insufficient evidence to prove oral proficiency predicates reading ability. Instead, positive association between oral proficiency in English with reading and writing is more evident among older children.

Overall literacy is a social practice embedded in the wider sociocultural context. Children acquire literacy through participating in various activities in their homes, communities and early childhood education settings. Emergent literacy encompasses reading, writing and oral language. Children gain awareness of print through exploring in a highly supportive, literacy-rich environment and interactions with peers and adults (Whitehead, 2002).

Early numeracy acquisition

Internationally, numeracy is defined as “a proficiency which involves confidence and competence with number and measure. It requires an understanding of the number system, a repertoire of computational skills and an inclination and ability to solve number problems in a variety of contexts” (DfEE, 1999, Section 1 p. 4). In New Zealand, numeracy is described as follows: “To be numerate is to have the ability and inclination to use mathematics effectively in our lives – at home, at work and in the community” (Ministry of Education, 2009, p. 2). As an important learning profile specified in the New Zealand Curriculum (Ministry of Education, 2007), students are expected to “grasp number skills of calculating and estimating, using appropriate mental, written, or machine calculation methods in flexible ways” (p. 7). In terms of early childhood education, numeracy learning in early childhood is woven throughout the strands of Te Whāriki, and specifically found in the strand of “Communication”. Sorting, comparing and problem solving, pattern recognition and spatial understanding is included in this section (Ministry of Education, 1996).

Human beings have the biological foundation for numerical development (Wynn, 1992). Mathematic knowledge is well grounded in our innate structures. Infants are sensitive to numbers (Halford, 1995). The research by Wynn (1992) found that one-week-old infants are able to distinguish from sets containing three or less objects and five-month-old infants notice the change if one object is removed. Wynn (1992) points out that three-year-olds can add and subtract small numbers mentally. Based on the awareness of children’s readiness in maths learning, Headington (2001) suggests that young children have already developed informal mathematics before school entry age and they are ready to learn complex mathematics in the early years.

The new understanding about children’s capability in mathematic learning is a big step forward from the traditional beliefs of young children’s mathematics acquisition which are built upon Piaget’s age-related child developmental theory. Piaget (1962) proposes that pre-number curriculum, such as sorting, ordering and matching, are appropriate learning experiences in early childhood

where children develop reasoning skills and number sense. Some studies have challenged the view that young children are mathematically unready. Children are recognised as capable maths learners as long as they are provided with a stimulating and supportive learning environment (Headington, 2001). Nevertheless, age is still correlated to children's mathematic ability to some extent. The study by Blevins-Knabe and Musun-Miller (1996) demonstrates that the frequency of number activities provided by mothers is associated with the age of the child. The older children are more frequently engaged in complex number activities with their parents than the younger ones. Aunio, Aubrey, Godfrey, Pan and Liu (2008) examined four to five-year-old children's mathematics performance from China, Finland and England. They found that "age is related to the children's early numeracy performance, as the older children had better performance than the younger children" (p. 214). In New Zealand, children are expected to develop mathematic skills in numbers, shapes and measurement step by step; there are no age-related expectations for children's maths learning in the early years because it is believed that young children develop mathematic skills at various rates (Wylie, Thompson, & Hendricks, 1996).

Numeracy learning is not limited to numbers, but number concepts and skills lay the foundation upon which later complex mathematical thinking relies (Headington, 2001). The importance of establishing number sense and counting in the early years has been acknowledged by a growing body of research and literature (e.g. Headington, 2001; Blevins-Knabe & Musun-Miller, 1996; Gerary, 1996). Number sense can be interpreted as an understanding of numbers and what they represent (Halford, 1995). Acquiring cardinality is a milestone in children's early mathematic thinking development. "Let children count" in their everyday lives is an effective strategy to facilitate children's understanding of numbers (Headington, 2001). Headington (2001) asserts that counting is a powerful way to learn numerical relations. Children develop counting skills by rote counting to one-to-one correspondence. Rote counting from one to ten helps young children build up number sequences. Gradually, young children learn one-to-one counting, a process associating numbers with the objects.

One-to-one correspondence provides children with the necessary logic basis for their counting, adding and subtracting (Halford, 1995).

Children develop their understandings of number, measurement and shapes in early childhood from the daily happenings, play and routines (Ministry of Education, 2007). Piaget (1962) proposes that young children construct their knowledge through exploring their surroundings. Play is the best way to engage children to discover the world around them. This is also applicable for young children's numeracy acquisition. Vygotsky (1978) proposes that young children develop abstract thinking through play and play in turn contributes to children's constructions of mathematical concepts. Barbara Rogoff (2003) suggests that children's collaborative play makes powerful contributions to mathematical learning. Mathematic learning is contextualised in children's play and daily life experiences, which make mathematic learning meaningful for young children. In her research, Macmillan (1998) highlights the strong link between children's spontaneous play and the development of numeracy skills. She asserts that children develop a range of mathematical thinking in terms of number and data sense and spatial sense through their play. For instance, children learn the concepts of position through observing their position in a turn-taking situation; children try to figure out the relationship between mass and volume of objects when they are engaged in water play (Macmillan, 1998).

However, children's learning is socially grounded within their home, community and culture (Rogoff, 2003). It should be noted here that play-based learning experiences are valued in major Western child developmental theories, such as Piaget and Vygotsky (Piaget, 1962; Vygotsky, 1978). Play is generally viewed as a vehicle for young children's physical, emotional and cognitive development. Nonetheless, play is not universally valued. Research by Parmar, Harkness and Super (2004) indicates that play is not universally emphasised in young children's learning and development. Chinese American parents instruct their preschoolers' learning in more formal ways.

Cultural learning experiences

Children develop mathematic knowledge within each culture. Factors contributing to children's mathematical learning before school include parent

expectations and parental involvement (Halford, 1995). Mathematics is made more relevant to children by linking it to their daily lives and by recognising and building upon their previous experiences from home. Headington (2001) asserts the richness of early learning experiences in mathematics apparent in the home environment facilitates children's number sense and one-to-one counting. Concepts become more meaningful for children by encouraging them to make connections between practical or concrete experiences and mathematic symbols. Mathematic development in the early years focuses on opening the door for children to discover mathematical concepts through active involvement (Halford, 1995).

The quality of early numeracy learning correlates to the frequency of children's involvement in maths-related tasks or play and child-adult interactions (Headington, 2001). Research examined the influence of the home environment and young children's number sense development (e.g. Young-Loveridge, 1989). It has been found that there is a significant correlation of frequency of number activities at home and children's mathematic performance. Higher levels of mathematic activity that children are engaged in result in a higher score on the mathematic standardised test of early mathematic ability (Zhou, Peverly & Lin, 2005).

Early numeracy acquisition in China

A high regard for basic skills has long been a tradition of mathematics education in mainland China. The two basics (basic knowledge and basic skills) and three abilities (calculation, logical thinking and spatial visualisation) are specified in the curriculum (Fan, 2004). Since Chinese early childhood education is administered by primary schools, a systematic teaching strategy is applied in Chinese pre-school. The emphasis of numeracy acquisition in early childhood is basic skills and basic knowledge. Simple maths, including identifying numerals one to ten, one-to-one counting, adding and subtracting within ten, and the introduction of space and time is addressed in children's early maths learning (Wang & Mao, 1996).

Goodnow and Collins (1990) advise that home factors such as resources and family support largely affect children's academic achievement. Asian parents

are more actively involved in their children's numeracy learning, and they offer more home tutoring to help their children achieve in math learning (Wang & Lin, 2005). Miller, Kelly and Zhou (2005) conducted a cross cultural study to investigate the parents' values on early mathematics acquisition in China and the United States. The research indicates that mothers from both nations consider literacy as important skills to acquire. Chinese mothers equally value numeracy learning as literacy, while mothers in the United States rate literacy higher than numeracy.

Chen and Stevenson (1995) suggest that mathematic proficiency is a necessity for job opportunities in this technological world. Higher mathematical skill-related jobs tend to yield a higher salary. Economic consequences of maths and science learning result in Chinese parents' increasing attention to their children's maths learning outcomes. At home, Chinese mothers view part of their role as teachers; they use didactic methods to teach children numerals, and require their children to practise computation skills (Huntsinger et al., 2000). They expect their children to spend more time on maths study.

Accordingly, different cultural values may affect how parents support their children's learning and what kind of activities and learning experiences they provide for their children at home. In accordance with Chinese cultural beliefs of hard work in learning, Chinese parents tend to offer extra homework for their children from the early years of school, whilst European mothers believe learning should be fun – they felt too much homework was given to primary children (Siegler & Mu, 2008). Furthermore, significant differences appeared in understanding the role of repetitive practice in one's mathematical learning from Eastern to Western perspectives. Woodrow and Sham (2001) point out that Chinese students believe they gradually build up understanding through practice and repetition, whereas British students believe that understanding is sudden insight. On the whole, Confucians believe that knowledge attainment and practice are two important elements of the education process (Li and Wang, 2004).

Relationship between language and numeracy learning

Costello (1991) asserts the vital role that language plays in mathematic learning. Development of literacy skills and using language as a tool to facilitate mathematic understanding is well illustrated by Costello (p. 180):

Learning mathematics can be seen as a continuous process of making sense, not only of the subject of itself, but of the quantitative and spatial aspect of reality. This process demands discussion and negotiations; it relies at times on skills of reading and writing, ultimately, formal language and notation in which abstractions can be made precise ...

Some studies examined the relationship between the linguistic system and mathematic achievement. Compared with English, the Chinese linguistic system has the advantage of clarity in conveying mathematic concepts (Aunio, Aubrey, Godfrey, Pan & Liu, 2008; Han & Ginsburg, 2001). Siegler and Mu (2008) suggest that Chinese systematic words underlying base-ten structures facilitate children's understanding about the place value system. Therefore, East Asian children, such as Chinese, Japanese and Korean students, gain advantages from their number naming (Han & Ginsburg, 2001). However, a study conducted by Cheng and Chan (2005) suggests that there is no positive association between counting skill and language, and language appears to have limited impact on children's mathematic learning. The impact appears to be evident in simple maths acquisition but not complex maths development.

Vocabulary, oral language and numeracy

English language learners in New Zealand schools are very diverse, and their language learning needs are not always apparent. Teaching programmes should address students' learning needs in both English language and mathematics. Teachers need to understand what their English language learners know and are able to do in relation to both the English Language Learning Progressions and mathematics and statistics.

(The New Zealand Curriculum: Mathematic standards

It has been recognised that children gain their mathematical understandings not only through hands-on experiences but also through interactions with others (Headington, 2001). Winsor (2007) identifies that limited vocabulary and language ability lead to mathematical learning difficulties. English as second language students are more likely to have difficulties with word problems. Cuevas (1984) examined factors that result in the maths learning difficulties among some English as second language learners. The study indicates that children from English as second language background have limited vocabularies to comprehend and solve problems. On the other hand, the teacher's ability to clarify mathematic ideas contributes to students' mathematic performance (Costello, 1991). Teacher's explanations about mathematic concepts assist children, and they are more likely to conceptualise maths concepts clearly if the teacher's explanation is clear. Ma (1999) compared mathematic teaching from the United States and China and found that Chinese teachers are likely to spend longer time to explain and clarify mathematic concepts in their classroom than teachers in the United States, and that is an identified factor that is attributive to Chinese students' better maths performance than their American counterparts.

Literacy and numeracy learning experiences in early childhood settings

Teacher's role

Scholars and educational researchers have acknowledged that early childhood educators significantly impact on children's learning (Neuman & Cunningham, 2008). Their performance correlates to providing thoughtful, developmentally appropriate and supportive learning environments for children (Gee, 2002). They conceptualise and determine the ways in which literacy and numeracy emerge in young children. The conception of the educator's role has been viewed differently in different teaching and learning approaches. From the 1950s to the 1960s, with the development of the behaviourist approach, Skinner (1968) proposes that educators take the role of manipulating events in the students' environment to enhance their learning; from 1970, the constructivist

approach informs that children actively construct their learning through exploration in a stimulating environment; consequently, the teacher's role is to prepare a stimulating environment for children to explore (Piaget, 1962). And sociocultural approaches addressed by Lev Vygotsky (1978) states that there is a reciprocal relationship between teachers and learners and they co-construct knowledge in a collaborative way. Fler (2002) indicates that teachers who are aware of sociocultural theory are more compassionate about understanding children's cultural practice and adjust their pedagogical actions to extend children's learning from a sociocultural perspective. It is essential for early childhood educators to understand how individual children build up their knowledge in their home and communities, and it is crucial to gain insight into the cultural factors in relation to people who give meaning to the cultural tools (Rogoff, 2003).

Teachers' performance is associated with their professional knowledge. The significance of a teacher's body of knowledge influencing children's literacy learning has been identified (Neuman & Cunningham, 2008). Similarly, teachers' mathematic knowledge is assumed to be central to effective teaching and students' learning outcomes (Ma, 1999). The word numeracy sounds similar to numerals, highlighting the central role which numbers play, but the mathematical content of numeracy is much wider and embraces number, algebra, data handling, measurement and even moves into shape and space (Headington, 2001). Lee and Ginsburg (2007) identified that a large number of pre-kindergarten teachers continually place emphasis on basic arithmetic in their mathematic teaching practice with four-year-olds but neglect other important maths learning areas in their teaching practice, such as spatial thinking and measurement. In addition, insufficient teacher preparation from teacher training institutions leads to narrow understanding about appropriate mathematical learning content for young children. Compared to mathematics teachers in the United States, teachers from Japan, China and Korea demonstrate better understandings of the subject and reflect this in classroom practice based on their pre-service systemic training before teaching (Ma, 1999). The New Zealand Teacher Council launched new requirements to enter the early childhood and school teaching profession to raise the standards of

knowledge and skills of new graduates. The requirements specify Graduating Teacher Standards, academic entry, literacy (English language competency), numeracy and skills in information technology (New Zealand Teacher Council, 2010).

Learning across home, early childhood settings and primary school

Children bring various literacy and numeracy skills when they start school (Aubrey, 1993). Primary school teachers are able to tailor their teaching to meet childrens' diverse literacy and numeracy learning needs when they gain a good understanding of the knowledge children bring to the school. A mismatch between settings inhibits children's learning (Dyson, 2001). Timperley, McNaughton, Howie and Robinson (2003) note that both early childhood teachers and primary teachers believe that literacy and numeracy activities in early childhood facilitate children's transition to primary schools, whereas early childhood educators and primary teachers have various expectations of children's literacy acquisition. Timperley et al. (2003) suggest that early childhood teachers value literacy and numeracy skills highly, and they believe those skills are important for children to get ready for school; in contrast, primary teachers emphasise that children's fine motor skills, such as holding a pencil and scissors correctly, and social skills are essential in school preparation. In the meantime, cultural differences are evident in non-mainstream children's home learning. Li (2006) found that there is discontinuity in Chinese immigrants' children's literacy learning from home to school in a Canadian context. This study indicates that Chinese parents focus on explicit skills practice at home, while school provides integrated learning experiences where literacy is developed through play-based activity.

Developing culturally responsive programmes

Curriculum

Te Whāriki is developed upon understanding the bicultural heritage of New Zealand society (Ministry of Education, 1996). Diverse cultures are also valued in the document. With an increasing number of immigrants from non-English-speaking countries coming to New Zealand, educators are facing rapidly increasing diversities in their educational settings (May, 2001). Managing ethnic

diversity and coping with the challenges of linguistic differences requires teachers to adapt their teaching practices to meet children's diverse learning needs. Supporting early childhood education settings to acknowledge the cultural practices of the home and community and develop culturally responsive programmes enhances the children's achievement (Li, 2004).

Te Whāriki (Ministry of Education, 1996) is the curriculum framework which applies to all licensed early childhood education settings in New Zealand. Carr and May (1996) propose that Te Whāriki provides a broad guidance for early childhood educators to foster children's holistic learning and development. Clark (2000) asserts that "effective programs know that support for language learning and interaction is the key to children's language growth" (p. 187). McLachlan, Carvalho, De Lautour andⁱ Kumar, (2006, p. 4) advise that broad language learning outcomes are addressed in Te Whāriki but it has a low profile of literacy, including "alphabetic awareness, phonemic awareness, questioning and clarifying children's narratives". This study suggests that more specific literacy learning goals and outcomes in the curriculum, like including phonemic awareness, coding and comprehension, might be helpful to guide early childhood teachers to plan appropriate literacy programmes with clear goals for children to achieve.

Internationally there is a continuous debate about whether we should standardise young children's learning; however, specifying the learning goals in early childhood education draws some concerns. Shonkoff and Meisels (2000) propose that the first concern is that uniform learning goals might not meet children's diverse learning needs, and underachievement may lead to low self-esteem that negatively affects a child's holistic development. Additionally, specific learning goals may result in teachers focusing on teaching narrowly defined learning goals. In New Zealand, young children are recognised as competent learners, and early childhood educators work to enhance children's holistic development. Carr and May (1996) advise that teaching which focuses on a few academic areas may not be responsive to individual and cultural diversity. Te Whāriki (Ministry of Education, 1996) empowers children's holistic

learning and development, and a narrow focus on a few areas of learning would not fit into the principles and goals of Te Whāriki.

Summary

One of the main purposes of the present study is to gain insight into children's literacy and numeracy learning from Chinese immigrant parents' perspectives. Relevant literature of parents' perception, in particular Chinese parents' beliefs and values of education, are examined in this chapter. Vygotsky's sociocultural theory is employed to frame the relevant literature of the research topic to investigate relevant factors which contribute to children's literacy and numeracy acquisition.

The main areas of the review are: diversity in New Zealand; Chinese immigrant parents' beliefs; literacy development at home followed by a brief introduction of literacy and numeracy learning in early childhood education settings. From the literature review, I noted research and literature which focuses on examining Chinese immigrant parents' beliefs and involvement in children's learning is, by and large, from Chinese Confucian perspectives.

Abundant large-scale quantitative studies conducted in North America examined the cultural differences in parental beliefs and home activities with respect to their children's education and learning from Chinese and Western cultural perspectives. However, a few studies investigated Chinese immigrant parents' subject knowledge and perceptions of their children's literacy and numeracy learning experiences at home in early childhood. Chinese immigrant parents' explicit practices, which are applied at home to facilitate their children's learning in both areas, are seldom explored. At the same time, less attention has been given to Chinese children's early literacy and numeracy learning in the New Zealand educational research field. The present study investigates Chinese immigrant parents' beliefs of education and home activities conducted to support their children's literacy and numeracy development in early childhood. It seeks to answer the questions: How do Chinese parents perceive their children's early learning? How do they view literacy and numeracy learning in early childhood? How do they support their children's literacy and numeracy

development at home? How do they value their children's early childhood learning experiences with regard to literacy and numeracy?

The next chapter outlines the methodology of the present research. This chapter consists of five main sections: background of the research; approach of the study; method of the study; data collection and analysis; and validity of the study.

Chapter Three: Methodology

This qualitative study investigates Chinese immigrant parents' perspectives on children's literacy and numeracy acquisition in early childhood. A phenomenology approach is used to frame this qualitative study. Six Chinese immigrant parents participated in this study. The primary data collection instrument employed in this study is face-to-face interviews. Telephone interviews were also conducted to clarify some participants' ideas after face-to-face interviews. A discussion of the data collection and data analysis are discussed in this chapter followed by validity and limitations of the research. This chapter consists of five main sections, including the background of the research, approach of the study, method of the study, data collection and analysis, and validity of the study.

Background of the study

Abundant cultural comparative studies have examined the relationship between Chinese parents' involvement and their children's school performance in western countries (Li, 2001; Chao, 2001; Chao, 1995; Chao, 1994). The findings emerging from these studies indicate that Chinese parents' extensive involvement in their children's learning largely contributes to their children's academic success. Chinese immigrant parents sustain many traditional features of Confucian ideology which, by and large, impact on their expectations for their children and their parenting styles (Chao, 1996).

The present study is not designed as comparative research to examine differences or similarities in parents' perceptions of literacy and numeracy learning in early childhood between Chinese immigrant parents and New Zealand mainstream parents. The primary objective of this study is to explore Chinese immigrant's views and values with respect to their children's learning in early childhood; to provide insight into unique experiences of individual Chinese immigrant families; to add new understandings of Chinese immigrant parents' points of view of children's early learning in Aotearoa New Zealand. The

research attempts to form a picture of the richness of values and experiences from individual parents instead of generalising their perceptions and ignoring differences existing in each family.

The current research focuses on examining parents' values and beliefs in depth. A small group of Chinese immigrant parents were interviewed individually to acquire comprehensive knowledge of their perceptions of their children's learning. Bogdan and Biklen (2007) assert that well-designed, small group research may provide more informative data to enhance our understanding of minority cultures than a large-scale, quantitative research method. Research methods, such as in-depth interviews, have advantages in exploring people's views, beliefs and experiences in greater detail (Minichiello, Aroni, Timewell, & Alexander, 1997). Qualitative research methodology was applied in this study where interviews were employed to gather data.

The theoretical frameworks

An interpretive phenomenological approach is used for this research to grasp human subjective experiences and gain deeper insights into human nature (Benner, 1994). Wimpenny and Gass (2000) propose that a phenomenological approach attempts to eliminate the bias caused by various preconceptions. The theoretical frame of this study is constructed upon the main research question of this study:

What are Chinese parents' perceptions of children's learning in early childhood: Literacy and numeracy acquisition?

To provide a deeper and accurate picture of the Chinese immigrant parent's beliefs, the following sub-objectives are also examined:

1. Chinese immigrant parents' perception of children's learning in early childhood.
2. Chinese immigrant parents' perceptions of children's literacy and numeracy acquisition in early childhood.
3. Chinese immigrant parents' facilitation of their children's literacy and numeracy acquisition in the New Zealand context.

In relation to the objectives of this research, this study focuses on developing understandings of what those parents value and how their perspectives are construed within the New Zealand context.

The social construction of reality

Minichiello et al., (1997) point out that individual ideas and thoughts can only make sense through linking the social and cultural environment where they live. Human beings construct their personal meaning within the specific social context. The current study seeks to investigate the Chinese immigrant parents' subjective knowledge and experiences constructed within the family and communities. Rogoff (1998) states that the purpose of social science is to understand social reality as different people see it from individual perspectives, and to demonstrate how their views shape the action within that reality. Research is a systematic attempt to re-see everyday experiences and construct knowledge from the explicit subjective experiences (Moran, 2000). Benner (1994) advises that researchers need to recognise that social relativities vary from situation to situation. Chinese parents from diverse cultural backgrounds may uphold diverse cultural values and implement various practices with their children.

Subjective knowledge

Phenomenology places the emphasis on studying the participants' subjective experiences to gain deeper insights into human nature (Moran, 2000). Phenomenology tends to explore the meaning of reality and the way individuals perceive their experiences (Benner, 1994). This study attempts to investigate how Chinese parents perceive and facilitate their children's early literacy and numeracy learning at home. Each participant's experiences are "lived" and "told". Denzin and Lincoln (1994) propose that the social interpretive approach rests on the premise that there is only interpretation for social life. People interpret everyday experiences and make decisions about how to act based on their subjective interpretation of the experience and behaviours of others. In the phenomenology mode, researchers do not assume that they understand people or events, instead, they attempt to understand the meaning of interactions in particular situations (Benner, 1994). Researchers attempt to find out how the

meaning is constructed around the events in their daily lives (Moran, 2000). The purpose of the interpretative approach is “to clarify how interpretations and understandings are formulated, implemented and give meaning in lived situations” (Benner, 1994, p. 4). Therefore, the central endeavour in this study is to acquire understanding of the subjective world of Chinese immigrant parents’ beliefs and values of children’s learning.

Ontology is that part of philosophy that concerns itself with the kinds of entities that exist and the features they possess (Ding & Foo, 2002). The nature of the social phenomenon being investigated is ontological assumptions (Wiersma & Jurs, 2005). Relating to this study, ontologically, Chinese beliefs of education and learning are predominated by Confucian philosophy in which education is significantly valued as a process of self-perception, and serves as upward social mobility (Li, 2004). Hard work primarily contributes to academic achievement from Confucian perspectives (Li and Wang, 2004). Chinese parents expect their children to work hard to progress in school. However, culture is a way of life that is an adaptation to external life (Rogoff, 1998). Social interpretivists believe that subject knowledge is acquired and communicated to other human beings (Moran, 2000). Knowledge is more subjective and constructed upon experiences and perceptions of a unique and essentially personal nature. Thus, knowledge is viewed as personal and subjective. Therefore, epistemologically, Chinese immigrant parents reconstruct their beliefs of education and develop some attributes which are nurtured in their new environments in New Zealand.

Data collection and analysis

Qualitative research

Qualitative methodology is applied in this study to seek answers for the research question. Denzin and Lincoln (1994, p. 4) propose that “the qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them”. Qualitative research focuses on the study of social phenomena and gives voice to the feeling and perceptions of the participant under the study (Moran, 2000).

People's attitudes, behaviour and experiences are deeply explored in qualitative research. Bogdan and Biklen (2007) indicate that qualitative and quantitative methods are tools to be chosen for research depending on their ability to relate to the central research question asked. In this study, Chinese immigrant parents' perspectives, values and their approaches to facilitate their children's early literacy and numeracy development are key information I attempt to explore. The flexibility of qualitative research may draw some unexpected responses from participants.

Primary method: Individual face-to-face interviews

Interviews are important data collection instruments in qualitative research to investigate behaviours or conceptions that cannot be easily observed. Kvale (1996) suggests that knowledge is constructed upon the stage of interview through interactions between interviewer and interviewee. Six face-to-face individual interviews were conducted in this study to collect data from April to May 2010. The participants had a copy of the indicative interview questions before the interviews started, which would give them time to consider and reflect on the interview questions. The length of interview was planned for 20 to 40 minutes. However, one participant talked more and the interview lasted 50 minutes. Three short telephone interviews were conducted after to clarify participants' ideas revealed in the face-to-face interviews. The participants reviewed the transcripts and notes at the end of the data collection. Minichiello et al., (1997) assert that the face-to-face interview is described as verbal interchanges through which the interviewer tends to obtain information of beliefs from the interviewee. Furthermore, the interview is a conversation with a purpose (Kvale, 1996). The qualitative research interview has a unique potential for obtaining access to and describing the lived world of the participant. Fontana and Frey (1994) suggest that the interview can explore complex beliefs and experiences because, with the flexibility of qualitative methodology, the interviewer can clarify answers from the interviewee during interviews. In addition, face-to-face interviews enable the interviewer to observe the participants' body language and facial expressions that indicate their responses to the question. The interviewer can adjust the questions to lead a productive interview (Fontana & Frey, 1994).

Furthermore, face-to-face individual interviews were applied to gather data in this study in consideration of the essence of Chinese culture. In traditional Chinese culture, people are expected to use non-confrontational strategies to ensure saving face and maintaining harmony within families or other social circumstances (Nisbett, 2003). Compromises, flexibility and hints are preferred by Chinese to manage conflict (Hartley, 1995). Therefore, data were collected in this study through individual interviews instead of group interviews. The advantage of the focus group interview is allowing participants to react to and build upon the response of group members. The uniqueness of Chinese culture, however, may discourage participants to express their ideas if their ideas differ completely from others.

Method two: Telephone interviews

Compared with face-to-face interviews, a telephone interview is viewed as an appropriate data collection method in specific situations (Fontana and Frey, 1994). It attracts many researchers for the efficiency of rapid data collection and less cost (Lowes & Prowse, 2001). Through the process of data collection, I transcribed the data gathered from interviews and found that some ideas that participants proposed were too brief and unclear. For example, Ting, Wen and Gin place a high value on play-based learning activities which largely differ from traditional Chinese perspectives of play, which is perceived as amusement, but they did not deeply explore why they believe so in face-to-face interviews. To further investigate those participants' life experiences which are attributive to their perceptions of play in children's learning and provide comprehensive information of this aspect, I decided to conduct short follow-up interviews to clarify participants' viewpoints. After I had discussions with three participants, they chose to respond to some questions via the phone which saved travelling time. Three short informal telephone interviews were conducted and documented by notes.

The participants

The researcher of qualitative research purposely selects participants who are able to provide significant information to the research topic from individual perspectives (Bogdan & Biklen, 2007). Qualitative researchers strongly believe

that there are multiple perspectives to be uncovered in their research. Marshall and Rossman (1995) suggest that maximum variation sampling in qualitative research contributes to the greatest possible diversity in the characteristics of experiences under study. To gain thorough understandings about parents' perceptions of children's learning, participants with various educational backgrounds, gender and children's age group may provide information from different perspectives.

Participants of this study are expected to bring insights into children's literacy and numeracy acquisition in early childhood. Chinese immigrant parents are the target group. Instead of using large-scale quantitative research, this research attempts to understand parents' values in depth and to explore their specific strategies to facilitate their children's literacy and numeracy learning. Pseudonyms are used for six participants' names: Xin, Wen, Gin, Lily, Ting, Lala, all of whom took part in the study voluntarily. In-depth information relevant to the research topic is explored.

The recruitment of participants for the present study included the principles of convenience sampling. Convenience sampling is a method that "involves choosing the nearest individuals to serve as respondents and continuing that process until the required sample size has been obtained" (Cohen, Manion, & Morrison, 2000, p. 12). The flyers which briefly explained the aim and process of the study in both Chinese and English were sent to the two Chinese community centres and six libraries on the North Shore and one library in the central Auckland area. Initially, nine parents showed interest in participating, but, because of their life schedules, only six participants attended interviews. Since the main data collection method in this study is face-to-face interviews, participants living in nearby areas took less time in travelling, and it is easier for them to arrange time to attend interviews and further participation in the study.

Five of the six participants are from mainland China, and one Chinese participant is from Indonesia. One father is included. Five participants updated their education in New Zealand to find a job. Five participants have more than one child, their children's ages vary from one to six, and they are or were involved in New Zealand early childhood education. Participants' characteristics

meet the criteria of participants described in the research design. Including both mothers and one father's views on their children's early learning in this study may strengthen the complexity of research contributing to understandings of the Chinese immigrant parents' perceptions of their children's learning.

Semi-structured interview

There are three types of interviews used in the field of research, including structured interviews, unstructured interviews and semi-structured interviews. Data of this research were gathered through semi-structured interviews. Kavle (1996) asserts that conversation is knowledge. Semi-structured interviews are more like a conversation than a structured interview. Wiersma and Jurs (2005) propose that there is a move towards discourse and negotiation about the meaning of the lived world. Semi-structured interviews combine the advantages of the other two methods, and data as knowledge are co-constructed by interviewer and interviewee through a two-way communication. In contrast, the structured interview is viewed as one-way communication, the interviewer only receives information but does not give information (Kvale & Brinkmann, 2009). Minichiello et al., (1997) argue that a structured interview is not an adequately valid method to study social phenomenon in depth. In addition, unstructured interviews give the interviewer less control on the flow of conversation so that the interviewee may explore more details that might not correlate to the research interests according to their own interests. The nature of the research is exploring the essence of the participant's experiences within their family and cultural contexts. Various perspectives of participants are expected to be explored to discover the patterns of the phenomenon. The participants' everyday practices supporting their children's literacy and numeracy learning are significant in this study.

To better understand the findings of the interview research, readers need to know how the interviewer steers the course of interviews through the introduction of the topic of conversation (Wimpenny & Gass, 2000). Various types of questions play different roles in guiding the interviews. Many open-ended questions were used in interviews of this study, and that allowed the

participants to freely express themselves. The interview questions covered the following main areas:

1. Parents' perceptions of children's learning in early childhood
2. Children's literacy and numeracy acquisition in early childhood
3. Strategies parents used to support literacy and numeracy learning at home

Interview questions design

Open-ended questions were designed in this study to put minimum restraint on participants' responses, and allow greater freedom and flexibility for the participants to explore the topic in depth and clear up misunderstandings (Minichiello et al., 1997). Open-ended questions encourage the participants to describe their points of view on the research topic in their own words (Kvale & Brinkmann, 2009). The majority of interview questions in this study are open-ended. Participants' life story, experiences and reflections of their stories and experiences were explored in six face-to-face interviews and three follow-up telephone interviews. On the other hand, open-ended situations may result in unexpected responses, which may suggest new aspects of the research question (Cohen & Manion, 1992). A variety of questions are included in the semi-structured interviews which serve different purposes during interviews. For example, descriptive questions enable the participants to describe and discuss their own experiences. The interviewer does not attempt to seek any specific answers to specific questions and shares the power in the control of the flow of information with participants.

However, the interview is not reciprocal participation of two "equal parties" (Kvale, 1996, p. 126). Interview questions take the role of steering the course of the interview. For example, what are your experiences of ...? That encourages more information to emerge from the participant's life and perspectives. Summarising questions encourages participants to summarise and reflect the meaning of the events or life experiences. A researcher needs to be aware that he cannot assume that people share common sense in interpreting participants' points of view, because they can be interpreted differently by other researchers

or participants (Bogdan & Biklen, 2007). Therefore, value questions are used to gain access to understanding the cognitive and interpretive process of people to find out participants' values and beliefs underlying those experiences (Minichiello et al., 1997).

Some interview questions in this study are as follows:

1. What do you think about literacy and numeracy learning in early childhood? Why?
2. What are your expectations for your children's literacy and numeracy learning in early childhood?
3. What type of learning environment and resources do you provide for your children to learn literacy and numeracy at home?
4. How do your children develop literacy and numeracy at home?
5. Could you tell me about your children's literacy and numeracy learning at her/his preschool?
6. What do you think of those preschool learning experiences?

Data collection

Interview place

Four face-to-face individual interviews were conducted at libraries and two interviews were at cafés. Interview time and place were arranged via phone. I provided options for participants to choose the appropriate place and time for them to attend interviews within the ethical guidelines that were approved beforehand. I rearranged the interviews several times due to the participants' personal circumstances. Participants were busy with their work, children's school activities and family affairs; it took two months to complete data collection.

Interviews are better carried out in natural settings for participants, where they feel comfortable and secure (Kvale, 1996). Interviewees are more relaxed and willing to share information when they are in a familiar environment (Kvale,

1996). Since qualitative researchers attempt to understand how people think and act in their natural settings, they try to “blend” in an environment where participants like to have a conversation (Minichiello et al., 1997). Most of the interviews of this study were conducted during weekends, and some participants’ young children were present through the interviews. Public areas, such as libraries and cafés located at the shopping mall, are familiar environments for them and their children because they regularly visit libraries with their children (the information was gained from the participants ahead of interviews). Natural settings for participants and their children help create a comfortable atmosphere for conversations. However, with consideration of the noise level in the public areas, specifically at a café, two interviews at the café were scheduled in the late afternoons where the environment was quiet which minimized the noise impacts on the interviews.

Interviews

A good interview rapport is established by attentive listening, with the interviewer showing interest, understanding and respect for what the participants say (Freebody, 2003). The quality of the interview relies on the effectiveness of the techniques in generating data and the volatility of the data gathered by the method (Cohen & Manion, 1992). I perceive the atmosphere of interviews as crucial to the quality of interviews. As a researcher from the same cultural background and similar age as the participants, I assumed that I share many similar beliefs with participants. One participant is not fluent in Chinese, and five participants are able to communicate in both English and Chinese. Parents have the option to respond to the interview either in Chinese or English. All parents were comfortable with spoken English, and interviews were conducted in English. Five of six participants updated their education in New Zealand, which built up their confidence in English. Furthermore, I documented participants’ own words to describe their own experiences. At the end of the data collection, the transcripts and notes were sent back for them to re-check to ensure accuracy of the data.

The interviews were recorded on a tape recorder and by note-taking then transcribed to Word documents. The tape recorder has the advantage of

obtaining a full and accurate record of the interviews. The accurate raw data remain when the questions and answers are recorded (Wiersma & Jurs, 2005). Additionally, using recording equipment enhances conversations between the researcher and the participants. The interviewer can focus on listening to the participants and participate in conversations. However, using a tape recorder for interviews is not problem-free. Freebody (2003) proposes that the main disadvantage is “both interviewers and participants may find the recorder inhibits interaction; a common concern from participants is once the conversations are recorded, you can’t change” (p. 235). Whilst the participants have been informed that they have the right to change, delete words after they receive the transcripts, I observed that the recorder made some participants uncomfortable initially.

Some degree of flexibility of qualitative research allows both researcher and participants to adapt the strategies through interactions (Lowes & Prowse, 2001). After the first two interviews, I found that they were more relaxed and shared some interesting experiences relating to the research topic after the interview was completed and the tape recorder was turned off. With their permission, I took notes when their conversation was relevant to the research after the interview. Meantime, as a new researcher, I still lacked skills to lead the interviews when their answers were too brief or they had less to share about a topic. This was why I conducted the follow-up telephone interviews.

Data analysis

The phenomenological method includes description, investigation of essences and phenomenological reduction (Moran, 2000). Denzin and Lincoln (1994) state that data analysis in phenomenology is a process of searching for commonalities of participants’ life experiences. The common essence of phenomena constantly remains in phenomena with different forms. Kvale (2009) suggests that interview analysis focuses on meaning. To gain better understanding about the meaning of data, I read and reread the transcripts. Kvale and Brinkmann (2009) suggest that qualitative interview data analysis consists of two important approaches: “meaning condensation” and “meaning interpretation”. Meaning condensation involves structuring the manifest

meaning from extensive texts. At the same time, Kvale (1996) proposes that the interpreter should go beyond what is apparent in the text and work out the structures and meaning which is not on the surface of the text. I analysed the transcripts of each interview, cross-checked all participants' responses to one topic and question (specifically the open-ended questions) to identify consistencies and differences. Then I grouped the transcripts into themes according to the research questions and the meaning underlying the participants' words, which formed some main findings of this study. I also recognized that the emergent categories became evident when I re-read the data, some ideas and concepts that I had not thought about re-occurred through the text, such as participants' views on the role of play in children's early learning, which are important findings of this study.

Ethical considerations

Voluntary participation

The ethics of the current study was approved by Auckland University of Technology Ethics Committees (AUTEC). All the participants took part in this study voluntarily and were informed both verbally and in a written document: Participants Information Sheet (Appendix 2). The Participants Information Sheet fully explained the participant's role and their rights in the research process. Before they entered the research site, they understood the nature and aim of study, and there were no risks involved.

Confidentiality and anonymity

In accordance with AUTEC principles, participants' confidentiality should be fully considered and protected through the research process. Minichiello et al. (1997) proposed that people often take part in interviews when they know they will not be individually identifiable since their privacy and confidentiality has been guaranteed by the researcher. Before the participants attended interviews, written and signed consents were obtained. In addition, all participants' names are pseudonyms. However, confidentiality and privacy in research is more than using anonymous names. The information provided by the participants should be strictly protected. The data of this study will be securely locked at AUT for six years. The information collected from participants is only used in this research

but not future research, and the information will not be shared with people at the research site.

Positioning the researcher

Qualitative research attempts to “objectively” study the “subjective” states of their participants (Kvale & Brinkmann, 2009). As a researcher, my previous knowledge from my “culture” and Aotearoa New Zealand early childhood training and working experiences as an early childhood educator influence my understanding of participants’ points of view. However, Marshall and Rossman (1995) suggest that the researcher understands and transforms her previous perceptions through the experiences of the participants who are studied. This view is consistent with Kvale (1996), that a researcher is a miner as well as traveller. I gain understanding of the participants’ perspectives of the research topic through the interviews, data analysis and reflection on the data.

Lowes and Prowse (2001) suggest that knowledge gained in interviews is constructed by both interviewer and interviewees. The research process is a reciprocal learning process (Denzin & Lincoln, 1994). What I learned from participants enhances my understanding and also shapes my perspectives of children’s learning in early childhood. Some findings have gone beyond literacy and numeracy acquisition. These consist of children’s learning style, motivation and parent-child relationships. I view myself as a listener, a learner and a contributor through interactions with the participants in the research process.

Validity and transferability

Credibility of qualitative research is largely attributive to the validity of data from qualitative research. Credibility refers to whether the participants’ perceptions of the setting match up with the researcher’s portrayal of them in the research report (Minichiello et al., 1997). Kvale (1996) states that the objectivity of qualitative research depends on whether the knowledge produced in interviews is objective. Misinterpretations of data might change the participants’ meaning within the context. “Interview is best understood as an interactional event in which members of culture draw on and rebuild their shared cultural knowledge, including their knowledge about how members of certain kinds routinely speak in such settings (Freebody, 2003, p. 137). In this study, notes and transcripts

were sent back to participants to ensure the data reflected their own thinking and had been transcribed correctly. They were allowed to rethink their words and ideas during interviews and therefore control the bias of a qualitative researcher.

Qualitative research conducted in one setting is not expected to be applicable to all other settings (Wiersma & Jurs, 2005). The current research attempts to understand Chinese immigrant parents' perspectives of their children's early learning in the New Zealand context. The participants have various educational backgrounds and their children are at different ages. I expected them to contribute to our understandings of the research topic from different perspectives. With considerable data collection and process, a comparatively accurate picture of participants' perceptions of their children's learning has been obtained. Hence, the findings of the research might be applicable for similar populations. It might inform other Chinese parents within a similar context to some extent. Nevertheless, it needs to be recognised that findings from this one cultural group cannot be generalised to other populations.

Summary

This study aims to gain an understanding of Chinese immigrant parents' perspectives of their children's literacy and numeracy learning in early childhood from their cultural and family contexts and a phenomenological perspective. Qualitative research methodology was applied in this research. Face-to-face individual interviews and follow-up telephone interviews were used to collect data in this study. Cohen and Manion (1992) propose that accurate data may be obtained if the researcher establishes a rapport and asks appropriate questions in an interview. As a new researcher, I built up my skills and reflected on each interview and tried to find out better ways to gain better quality interviews. My skill in being a researcher has improved during the whole process.

With respect to the findings of the research, unlike quantitative research, the researcher knows what kind of information they are after. The findings of the current research are far beyond my assumptions of Chinese parents' beliefs and practice with their children with regard to their learning. The findings of the study support that Chinese immigrants uphold some traditional beliefs of

education which are largely shaped by Confucian ideology. They continuously construct their understanding of children's learning based on their experiences in New Zealand. Aotearoa New Zealand mainstream cultures and participants' own life experiences have a great impact on their perceptions of children's learning and home practices. However, all research has limitations. The limitation of this research, such as less generality, will be discussed in the Conclusion.

Major findings of the research will be represented in the next chapter. The chapter of findings consists of Chinese immigrant parents' beliefs of education, early literacy and numeracy acquisition and the educational activities conducted at home to support their children's learning, and evaluation of literacy and numeracy learning experiences in early childhood education settings.

Chapter Four: Research findings

This study explores Chinese immigrant parents' perceptions of their children's early learning within the New Zealand context. Qualitative research methodology based on an interpretative phenomenological approach was applied to discover the participants' life experiences in relation to children's learning at home. Data were collected through six individual face-to-face interviews and three follow-up telephone interviews. Six Chinese immigrant parents explored their beliefs of education from Chinese traditional perspectives, combining their current social situations of being an immigrant. They described the strategies employed at home to facilitate their children's literacy and numeracy development and discussed their children's learning in early childhood settings.

Participants' backgrounds

Six Chinese immigrant parents, recruited from local communities, such as the Chinese church and Chinese community centres, participated in the study. Five participants have school age children, and some of them have preschoolers to look after. With their busy life schedules, the participants spent time with me on this research to share their ideas, experiences and stories on their children's learning in early childhood. To protect the confidentiality of all participants, I have allocated them with the following pseudonyms: Xin, Lily, Lala, Gin, Wen and Ting.

Five of the six parents are from Mainland China. One Chinese parent is from Indonesia. They have lived in New Zealand for more than six years. Except for one participant who immigrated to New Zealand with his three-year-old child, five participants' children were born in New Zealand. All participants' children were/are enrolled in New Zealand early childhood settings, such as daycare centres, kindergartens and play centres, before the age of five. Six participants gained their degree back in their home country, and five participants were

enrolled with New Zealand universities, and four obtained their bachelor degrees.

Brief introduction of findings

This qualitative research framed in the phenomenological approach attempts to investigate the qualitatively different ways in which people experience various phenomena (Moran, 2000). The participants' beliefs of education, points of view of literacy and numeracy learning, home practice and early childhood education learning experiences are covered in this section. The findings of the study indicate that participants perceive literacy as a fundamental skill for children to get ready for school. They expect their children to know letter names, write letters, read simple words and sentences. Parents' expectations vary according to their understanding about children's learning experiences, but all participants view recognition of letters as a necessity in literacy acquisition in early childhood. All participants addressed number knowledge and basic number skills in relation to early numeracy acquisition. Skills in counting, understanding one-to-one correspondence and addition and subtraction within ten were emphasised by participants. In addition, participants stressed that children's literacy and numeracy acquisition in early childhood is informal and serves the main purpose of preparation for school, and that is different to formal schooling. Parent Gin said: "Children learn pre-reading and pre-writing skills. Parent Ting said: "Formal learning starts from primary school." Parent Lily said: "Primary teachers will teach them to read and write". Key findings are analysed in the following graphic:

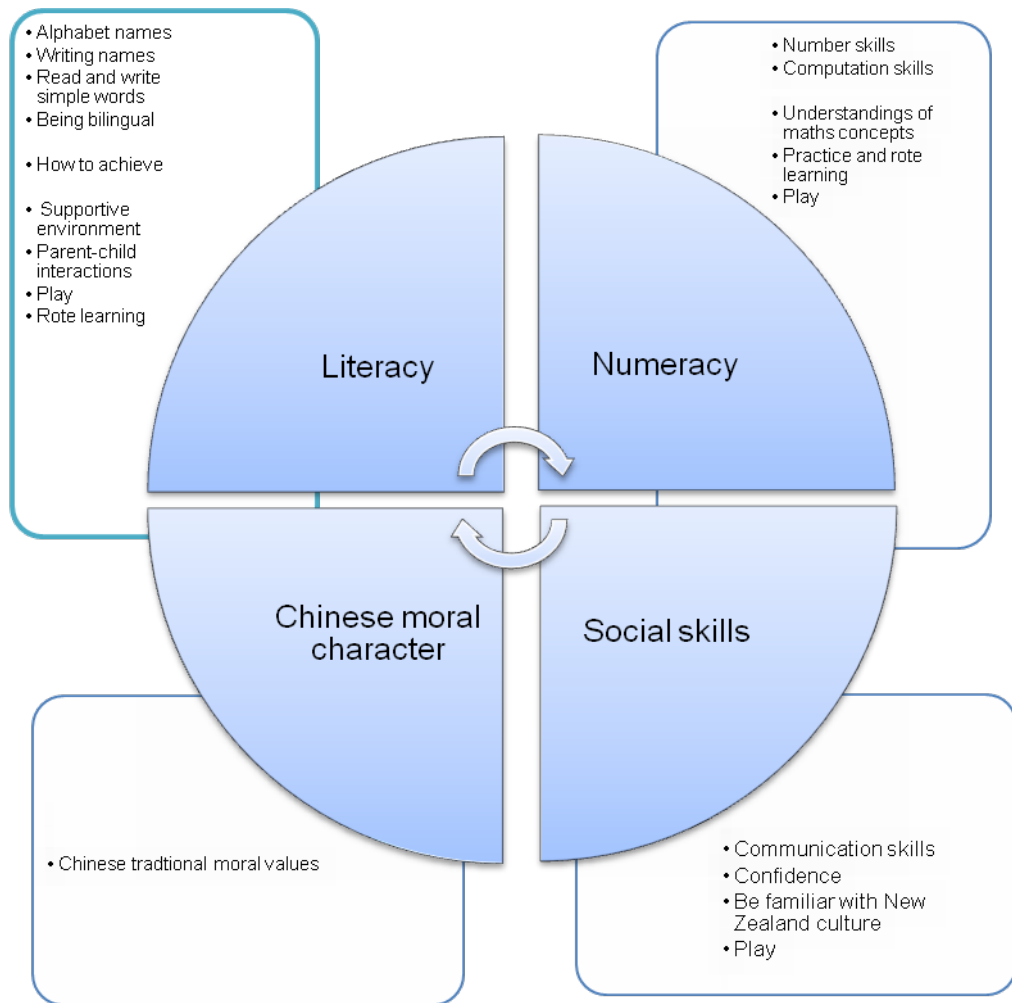


Figure One: Chinese immigrant parents' expectations of early education in the four areas.

The data of the research are grouped into themes which are generated from the interview questions and participants' responses in interviews. With participants' own preferences, some participants explored more in some specific areas. The findings are grouped in themes as below:

- Parent beliefs about children's learning and education with Chinese immigrant social context (e.g. social skills, moral values)
- Parent expectations about children's literacy and numeracy
- Key factors of children's literacy and numeracy learning

- Children's early childhood learning experiences
- Being bilingual

In the following section, the findings reveal the participants' attitude to literacy and numeracy acquisition in early childhood and why they believe so.

Achieving in education

Participants were positive about literacy and numeracy acquisition in early childhood. They explored the reasons why young children need to learn literacy and numeracy in the early years. Xin, Lily, Lala, Ting and Gin pointed out that children need to master basic literacy and numeracy skills in early childhood. They believed that young children are capable of learning literacy and numeracy knowledge in early childhood; literacy and numeracy skills are essential to prepare their children for primary schools; literacy and numeracy skills are crucial for children to achieve at school.

Participants realised that children have the ability to learn literacy and numeracy in the early years. Five of the six parents perceived that literacy and numeracy is fundamental knowledge for children to learn other subjects or knowledge in later schooling. Parent Gin said:

They have adequate capability to learn literacy and numeracy. Literacy and numeracy are parts of important skills that open possibilities to learn other subjects later on.

In addition, Wen emphasised that children with English as a second language naturally build up their English skills as long as they are in an English-speaking environment. As a parent, he is less concerned about his children's literacy acquisition in early childhood. He proudly told me that his son, who is already in primary, is doing well in reading and writing with support from ESOL class in his first two years of primary school:

From my two children's experiences, in my opinion, in early childhood, I did not provide any specific help for my two children with

literacy or numeracy, because I found young children have a strong ability to learn language. My son was three-and-a-half- year old when he started his preschool here, at the beginning, he did not know English at all. He could communicate with his friends in English after a short time. I found it is unnecessary, in New Zealand, such an English speaking country to worry about their English. He attended ESOL class in the first two years, he is in year 5 now, teacher said his reading and writing is above average.

The participants emphasised that the main purpose of young children's literacy and numeracy acquisition in early childhood is school preparation. Except for Wen, the other five parents addressed the importance of children's early literacy and numeracy acquisition in early childhood, especially for children over age four. They view literacy and numeracy as essential for children to be ready for primary schools. Xin said:

I felt it will help with children's school preparation if they know some literacy and numeracy. From my daughter's experiences, people said that we do not need to prepare anything for school in New Zealand as parents in China. But she was very struggling, and it was hard time for her and us.

Participants highlighted the importance of learning literacy and numeracy to assist their children's transition from early childhood centres to primary schools. They believed that education matters to them from traditional Chinese perspectives. Xin said: "In Chinese way or Asian way, we do have, every parents do have high expectations with our children's school performance." Education is a family matter for both parents and children. Lily comments: "Education is important for our children and for me."

English as a second language has been recognised as a disadvantage to children's school readiness. Participants Ting, Xin, Lala, Lily and Gin explained that coming from English as second language background, having basic literacy and numeracy skills facilitates their children's transition from early childhood to primary school. Parent Ting said:

Children can start learning some literacy and numeracy after four years old. I think those are kind of important skills for them to prepare for primary school especially with English as our second language.

According to Xin, poor academic performance caused by the lack of literacy and numeracy skills restrains children's social relationships in primary schools. Children's failure to learn literacy and numeracy skills results in poor relationships with peers in the school. Xin recalled that her child was not confident with limited literacy and numeracy skills after she started primary school.

My child started year one, not years zero. Her classmates already knew some numeracy and literacy in new entrant class, (When) she started school, she did not know much reading and writing. She was not confident at all, she felt all the children all act like aliens to her. She had no friends.

Five participants addressed the significance of doing well in school for their children. The findings indicated that preparing for school is the main reason for their children to attain literacy and numeracy knowledge in early childhood. The participants further explored why they perceive formal school learning is important for their children to raise their social position in future.

Studying is an efficient way for children to achieve better lifestyles according to participants. Parent Lala believes that higher education probably leads to well-paid professions such as lawyers or doctors. Those professions provide better lifestyles for people. To achieve the goals of entering good professions, parents need to prepare their children from an early age.

Lala is a young mother in her twenties with two children. She explained why she believed education makes differences in people's lives. She agreed that it might be inappropriate to overload young children in academic learning at a younger age, but getting children ready to learn academic skills is still important in the early childhood stage.

I don't push her to be really academic, but, of course, education brings people to a better life, of course, if you are a lawyer or a doctor, it does make differences. As parents, you can't order your children, you have to do law or you have to do medical ... you will be a doctor in future and that gives you better lives ... But you expect them to do, and prepare them to do that (Laugh).

The participants explored the reasons to justify their views that children need to acquire basic literacy and numeracy skills to enable them to succeed in school from a minority cultural group with English as second language background. In addition, it needs to be acknowledged that the Chinese have a tradition of respecting education. The following section explores parental involvement in children's learning at home.

Chinese perceptions of learning in early years

Parent Xin incorporated Chinese culture in her daily parenting. She introduced Confucian beliefs about learning to her children and teaches them San Zi Jing. Xin emphasised that traditional Chinese values about learning help her children establish the right attitude towards learning. She said:

Introducing traditional Chinese culture, Chinese values to our children help them understand why study is important for them. Because we do have long history of respecting teaching, respecting education.

Xin teaches her children that study is a powerful way to empower people's intelligence. In accordance with a Confucian view, studying is the main way to perfect oneself. Parent Xin considered that the essence of traditional Chinese learning beliefs reinforces children's willingness to study and fosters children's understandings about the meaning of studying. She expected her children to take responsibilities for their learning instead of the parents.

I teach them traditional saying like, if one does not exert oneself in youth, he will regret in old age. A year's plan starts with spring, a day's best studying time is morning.

Xin highlighted the importance of establishing a good learning habit for a child in the early years, and that is viewed more important than learning itself. Habit is beneficial to children's learning throughout schooling. Confucius work and proverbs are introduced by Xin to reinforce her children's understanding of traditional Chinese values of education and learning. e.g. "A year's plan starts with spring, a day's studying starts from early morning." She said:

Instead of teaching them maths, how to read and write, it is very important to teach them a learning habit, if you don't teach them learning habit, maybe 10 years later, you are still struggling to teach them while they are in high school. If they have a learning habit, a good learning habit, they might not need help later on.

Participants explored the influences of immigration on their beliefs of learning in early childhood. They examined their educational and life experiences which have influences on their conceptions of early childhood and children's learning.

Influences of immigration

One parent expressed about issues of unequal opportunities in society between subculture groups and the majority of Kiwis. She felt immigrants and their children are less competitive for an equal opportunity in future employment. Immigrant children need to work harder and achieve better. The situation of being an immigrant increases parental expectations for their children's school performance.

No matter us or our children, they were born here and they will be growing up there, differences between us and locals do exist. We can't ignore that and we can't eliminate that. I think our children will not have equal opportunities if they can't perform like times better than the local kiwi here.

The four participants were enrolled with New Zealand universities since they immigrated to New Zealand. Ting was involved in a play centre with her child. Lily completed her university in China, majoring in English Teaching. She was enrolled in a New Zealand university and studied a degree in education after

she immigrated to New Zealand in 2001. She explained that both Chinese and New Zealand pedagogy shaped her parenting and her home practice with her children. Lily said:

I think because we come from Chinese background, I got my own knowledge from Chinese educational system, which is very different than western education system ... we have some experiences, sometimes, we might use them in our kids, but I also got training in early childhood education here, I realised differences. I always choose the ways which benefit children's learning best.

Participants admitted the change of social context from China to New Zealand largely influenced the parent-child relationships between them and their children. The reciprocal relationship between parents and children are commonly found among these participants. The parent-child relationship is dynamic. Lala commented:

I think from my generation, my mum to me. The relationship is just like control, my mum wants me really like a girl. No big laugh. When I immigrated to New Zealand, relationships between me and my daughter changed a lot ... I mean you can be a friend.

All participants play the role of facilitator in their children's learning, they respond to children's needs rather than take over their children's learning and make decisions for their children in relation to their learning. Ting encourages her children to gradually take ownership of their own life choices from a younger age. She respects and supports her children to choose what they like to learn not just following her preferences.

I want my children to be able to make their own decisions about what they like to learn, but not what I want them to learn.

Gin would like to maintain a flexible relationship with her daughter depending on various situations. She is a playmate while she is doing games with her daughter. She acts as a teacher and expects her daughter to listen carefully when she teaches her new knowledge.

It is a kind of mixture, sometimes you are a playmate, a partner. Sometimes when I teach her something, for example reading a book, we sit down together then I felt that we are more like traditional teachers ... it depends on situation.

Pereptions of early childhood

Five of six participants emphasised that their children deserve a happy childhood. In contrast, academic learning such as literacy and numeracy should be introduced to young children by appropriate strategies, and they perceive that academic learning actually begins in primary school. It is inappropriate for parents to force their children to learn those skills in early childhood.

(They are) happy and healthy. It is not worth if you force your child to have excellent academic performance, they can learn literacy and numeracy skills as they grow, they should not do too much academic stuff without fun, just under parents' pressure (Wen).

Wen further shared his feeling about children's leaning in New Zealand. He said that children are judged and assessed differently in China and New Zealand. He believed that children should be recognised as individual learners, and they develop at various paces.

In China, a good child should meet a certain criteria, they have a model of a good child. But here, it is different. Children have more room to grow to be themselves. That is more objective.

Learning interest and play

Participants identified the main factors such as children's interests, parents' role of extending children's interests by and large affect literacy and numeracy learning in early childhood. They explained how those key factors influence their children's learning.

Children's interests largely contribute to their learning outcomes. Participants believe that adults need to identify children's interests and offer them support to

extend their learning based on their interests. Children are deeply engaged in learning experiences if they are interested in the activity. Lily said:

If they raise the questions, if they are interested, that is more helpful than teach them some new knowledge for them to (memorise). They raise the topic, they will learn better.

Parents need to be able to identify children's interests and play the role of a facilitator to extend children's learning interests by providing a supportive environment. Available resources and materials are offered by parents to enhance children's early literacy development. Lala comments:

My daughter, she is quite into reading at the moment, in that case, that is her emergent interest at the moment, the adult role is always support(ing) her and providing her environment, so both is important. Emergent interests lead adults to prepare environment for children.

Gin argued that it is important to provide age-appropriate learning opportunities for young children. However, it is not completely true to focus on the activities that children are interested in. Some children initially show less interest when they are involved in new learning experiences, but they may develop their interests in the experience after they gain rewards from their achieving. It is important for parents to guide their children to be persistent with their learning in the beginning stage of learning. She shared her daughter's piano lessons experiences with me to explain her view on letting children go with their interests is not always right.

My daughter is playing piano, but she is not really into playing in the first couple of years. I have to sit by her when she was playing at home, but she starts to practise piano without our reminding after she was chosen by her school to perform at the school concert ... She was proud of being able to play at the stage. That really inspires her to practise piano.

Six participants addressed the importance of the role of play in children's holistic learning and development, including their literacy and numeracy.

Parents realise that play is a powerful medium for young children to gain language, social skills and literacy and numeracy as well. Wen said:

It seems they are just playing, actually, a lot of learning happens when they play, they learn language, social relationships, they sing songs, know concepts of numbers.

All participants gave high credit to play in children's literacy and numeracy learning. Parents believe that play is an appropriate approach to engage young children in literacy learning than structured learning styles. The process of play comprises both process and product of learning. Parent Lala commented:

Play is quite important though; because the child is at the play age, it is just impossible for you and the other teacher to ask the child to sit down to do some writing and drawing. Play can be one of the means to help the children to sit down. Play is a process; play probably can be a product too.

Literacy and numeracy learning is incorporated in children's games. Children learn numbers, counting through their favourite games. It is an enjoyable learning style for young children. Parent Ting was involved in a play centre with her child. She had opportunities to experience how other parents engage children in learning through a variety of play activities. She makes play dough for her children at home and plays games with them. Her children learn counting through playing the game:

It is easy and fun for children to learn (numbers) through games, songs. Teachers do a lot of games with children, when teachers count 1, 2, 3; children are keen to count. My children like to play hide and seek at home, they count up to three at the beginning, then from 1-10, then to 20. We might not realise but learning happens.

Furthermore, play provides opportunities for children to practise the fine motor skills that are attributive to writing skills.

From my experiences, I did not tell my daughter how to hold the pencil, but when she is really into the puzzle, puzzle with knobs, I am

just sort of showing her how to play the puzzle, and this the first stage of how to hold the pencil.

However, Xin pointed out that literacy and numeracy learning should be recognised as different experiences to play. She explained literacy and numeracy acquisition is a process of formal learning. And learning requires efforts, and setting up goals, and achieving the goals.

Children need to realise learning is different from play. You need to work hard and achieve goals.

To support children to develop their learning interests in various areas, participants all enrol their children in extracurricular activities, such as swimming lessons, piano, dancing or singing lessons. Lala shared her experience with her child in the musical school.

In the musical school, I take my daughter to musical lessons every Saturday morning, actually the lessons are given by a kiwi teacher, and half of the students are from China, more than half.

Literacy and numeracy learning at home

Four of the six participants viewed literacy and numeracy as key skills for children to achieve at school; their expectations for children's literacy and numeracy learning correlated to school preparation. Participants Xin, Lily, and Ting suggest that children may start to learn literacy from four years old.

Children can start learning literacy and numeracy after four year old. I think those are kind of important skills for them to prepare for primary school especially with English as our second language.

Gin and Xin argued that there was no certain positive relationship between children's age and their literacy and numeracy learning. Parents need to carefully observe their children's responses when they are engaged in their learning. They need to wait for the sign which indicates the child is ready to learn.

It's not always right if you try to teach them too early. Each child the age for them to be ready is different ... you need to find those signs indicating they are ready or not. Nevertheless, we have to teach them ... if you write down a numeral 1, you tell her 1, but she shows less interest in the number, she thought you are talking about the colour of the paper, in that case, you'd better wait for some time.

Early literacy learning

Participants' expectations of their children's literacy depend on their children's developmental stage. Lala's child is around three; she expects her child to be able to hold the pencil correctly. Ting, Gin, Lily expect their children to be able to recognise letter names and write their own names by school age. Parent Xin expects her children to recognise some basic words, being able to read simple sentences.

I think all the children need to learn some basic literacy, like being able to recognise simple words, being able to read simple sentences (Xin).

How to write their own names, also alphabet letters, recognise letters, the best is they can write all the letters (Lily).

Participants highlight that the language is a medium to socialise with others. The ability to speak English has been addressed by parent Ting. Comparing reading and writing skills, she pointed out that speaking is essential for her children to follow the teacher's instruction in schools.

Speaking is very important. Like being able to speak simple English, understand teacher's instructions, answer questions.

Parent Ting shared one of her stories about her daughter. She felt that limited oral English restrains her children's free communications with their teachers and peers, and that negatively affects their confidence and self-esteem and social relationships.

I found it is bit hard for my children to interact with teachers in English freely. They can say yes or no. For example, when teachers

greet her in the morning 'How are you today.' She kept quiet. I asked why when we got home in the afternoon, she said I don't know how to response, I told (her) she can say "good, thank you!" Now she says so when teachers greet her. But she is not able to keep the conversation going, like sharing her weekend experiences as her kiwi classmates do. I asked her why; she just says she doesn't know how to say it.

Parent Lily addressed the importance for parental involvement in children's literacy learning at home, scheduling children's time to practice, storybook reading with children and watching television programmes.

Parents need to arrange some time for them (their children) to practice their literacy and numeracy, like reading, read some books to them; setting some tasks for them to do.

All participants believe that environment is powerful in shaping children's learning and developments. Children build up interests in literacy and numeracy learning if they are exposed to supportive environments. Books are necessities in all participants' home environment. Accessible literacy resources such as children's literature, pens and paper create a literacy-rich environment. Parent Lala described the environment she set up for her children:

Environment is always powerful. If you take your children to library on very regular basis children will love the book. If you bring your children to park they will love outdoor activities.

Parent Lily described how she plays a role of facilitator in her children's learning process through the parent-child interactions. She pointed out that mothers are also mediums to connect their children with the wider community, through which children gain more opportunities to encounter new knowledge that broadens their views and enhances their literacy learning.

My role, I think I put this way, just support them to put myself as a trigger, I could say that word ... when we encounter things involved with literacy and numeracy, we need to emphasize that, help them get some ideas.

Parent-child interactions are highly valued by all participants. Interaction is the main ways for parents to facilitate their children's language development. Lala said:

Children are really in their language sensitive period, if we keep talking with children tell them stories, or whatever, of course children can learn, you know, (through) interaction with adults.

Lala addresses the significance of parental modelling in children's literacy and numeracy development. Parents play the role of first teacher of their children. Children view their parents as the role model at home.

Parents loves reading, their children will imitate what their parents doing at home.

Numeracy acquisition

All parents except Wen specifically described their expectations of their children's numeracy learning in early childhood. The key numeracy skills they addressed in the study included counting, associating numbers and objects, recognising numbers, addition and subtraction within ten.

One-to-one correspondence is learning focus in early childhood. Children are able to associate numbers with objects (Gin).

I think my child, all the children need to know some basic numeracy, like simple maths including plus minus within ten (Xin).

They can count from 1-20, also backwards, can do some calculations like plus or minus within ten (Lily).

Parent Gin was involved in her daughter's numeracy learning in her daily housekeeping work, like cooking and gardening. She believes that young children should learn literacy and numeracy in an enjoyable way, and parents should allow children to make mistakes in this process.

When I was cooking, I ask her to bring two apples, when I was doing gardening; I asked her for two more scoops of compost. If she made mistakes, that is not big deal, and it is not structured one that she

needs to sit down and do it correctly is more like doing things together.

Both Lala and Ting agreed that everyday household activities are natural learning experiences for their children to learn counting and number concepts. Children are spontaneously engaged in those activities and learning naturally occurs. Ting said:

I don't do it purposely, it is just our life experiences, and it is coming naturally from our experiences. Children can pick up very quickly; they do not feel the stress of learning something.

The participants' facilitation of their children's numeracy learning is beyond number skills acquisition. They support their children's mathematical learning through playing puzzles and blocks alongside their children. They acknowledged that the importance of the process of learning should be more focused than the product "what their work looks like". Parent Ting explains:

That is all right when the blocks collapse. I like to encourage him even praise them as the teachers do, that is a part of play and that is the way they learn. It doesn't matter if their work doesn't look good.

Culture conflict: Hands on or hands off?

Parent Xin feels life experiences, such as involving children in cooking, is optional, but in Chinese culture, allowing young children in the kitchen might not be safe. By contrast with Ting and Lala who believe that children learn through household activities, Xin views household activities and numeracy as two learning areas.

Yes, I think there is much to do about daily life experiences. Like in my culture, let a three-year-olds in the kitchen is kind of dangerous.

Xin views memorising basic maths fact including minus and plus within ten to twenty is essential to children's numeracy learning in early childhood. She believes that children's familiar life experiences can be used to help them develop the abstract understanding of mathematic concepts. But rote learning is

still crucial to build up fundamental maths knowledge. Similarly, she also asked her child to memorise basic English words to build up vocabulary.

Recognise numerals, know the meaning of minus, plus. Of course, you can give them examples such as "here is an apple, I give you one more, then you have two" that kind of explanation. But the key point is you know one plus one equals two. That helps solve maths problem later on. I just think for those basic facts, you have to memorise them; there is not shortcut to learn that.

In contrast, Ting addressed the importance of understanding the concept of numeracy, such as the meaning of numbers, minus and plus. She feels understanding those concepts may take the child a longer time than memorising the maths fact, but it will be beneficial to children's maths learning in a long term.

Children have very good memory. It is easy for them to memorize one plus one equals two, but the point is they need to know what 'one' means, what "two' means. If they don't know the meaning of numbers, understand the concept of numbers, they may have problems when they are in different situations ... Understanding concepts of numbers and other maths rules is a key aspect for me.

Participants explored their children's literacy and numeracy acquisition with English as a second language. They believed rote learning helps children to establish a foundation of learning. Parents used their first language to facilitate their children's mathematic learning because they feel it is much easier for them to clear up the maths concepts. Meanwhile, some of their children do experience confusion caused by linguistic differences (Chinese and English) in numeracy learning.

Parent Gin and Xin expressed that rote learning for children, such as memorising songs and rhymes for saying numbers, is beneficial to their numeracy and literacy acquisition. Children gain basic understandings of letter names and orders of cardinal numbers. Gin said:

Sometimes they say there is benefit children get by singing songs ABCD, singing numbers without singing in correct correspondence. At least they know the letters or number comes after a is b. Children know 5 is bigger than 3 because they know 5 comes after 3, they count from small numbers to big ones.

Learning numeracy with English as second language

Parent Xin believes that mathematics reflects logical thinking. Understanding maths concepts from one's native language is easy for them to grasp. The child can apply the concept to different language situations. It is helpful for parents to introduce maths in their mother tongues.

I think for our parents, first language is not English, it is better to use our first language to teach them.

Numeracy comes in different forms; basic maths is one part of numeracy learning. Problem solving is associated with the ability of comprehending words in speaking. Parent Ting said:

Maths is not always in forms of numerals on the paper, sometime, they ask you maths question in words, if you cannot understand it, you cannot answer it. So I think literacy and language is more important for us.

Xin found her daughter experienced difficulties when she explained maths concepts in two languages. Parent Xin found it is hard for her child to tell the time in two languages.

I do teach her how to tell the time in both languages. But it is very difficult for her to convert from one language to another. Five clock zero 5 minutes (5 dian ling (zero) wu fen is a Chinese way to describe time "five minutes past five"), but she thought that is fifteen minutes past five. She couldn't understand the meaning of zero there.

Xin feels reluctant to tutor her child English as a subject. Memorising is mostly used to help her child's English learning during the school transition.

I found our English is not good enough to teach them English as a subject. I asked her to memorise around 100 basic English words.

Literacy and numeracy in early childhood education settings

Ting believes that her children learned about the New Zealand culture in early childhood settings. She perceives that the childcare her children attends is a window for her children and her to understand New Zealand culture and that helps her children to build up confidence to communicate with their friends. It also opens a window for parents to embrace the mainstream culture.

In my daughter's centre, sometimes they set up cooking activity. Children take a piece of fruit from home and make soups and food. I like the way they did that. Children know how kiwis cook food, they learn new words through those activities. Understanding the local culture is very important, you know, as the first generation of migrants, we don't have many opportunities to know the culture. Children are able to communicate with their friends. You see, we like to talk about things we know.

Xin said that early childhood teachers do teach children some literacy, but she is uncertain whether teachers have specific learning outcomes in literacy and numeracy learning. Her example is:

I do think they learn quite a bit in early childhood. Each child is different, some children might pick up easily, and other children just pick up basic things ... I don't know whether they have standards to teach children.

Lily recalled her children's literacy learning experiences in childcare. Literacy was integrated in the art activities.

The teachers choose like one letter for them to practice every day. They choose one letter, like an A word, like aeroplanes, give them some examples to do, also they might draw an aeroplane.

Participants demonstrate their expectations and understandings about the teacher's role in supporting children's literacy and numeracy learning. The teacher's main job is preparing a stimulating environment for children to explore rather than teach them to read and write in early childhood. Parent Gin said:

Early childhood teacher is supporting children get early ideas, instead of directly teaching them write and read ... children learn through play, teacher support them to grasp ideas and early knowledge rather than directly teaching them.

Parents place a high value on early childhood teachers' strategies of introducing numeracy to children in early childhood settings. Teachers are expected to prepare a numeracy-rich environment and facilitate children's numeracy development through interaction.

Even when children in the family corner, they do counting (Lala)

Reading and writing are not the only important skills for children to have ready for school. Parent Gin believes:

Children learn pre-reading and writing skills in pre-school here. And I think social skills are very important to their transition to primary school.

Parent Lala expressed that she does not expect teachers to do actual writing and reading with her daughter within the New Zealand context. Teachers' teaching practice always correlated to the philosophy of the centre. A play-based curriculum is common in New Zealand.

If teachers are good, they always extend children's thinking by using different ways. But for teachers who are not good enough. Every day is like same, everyday is repeating.

Being bilingual

It is evident that all participants are aware of the importance of learning Chinese; being bilingual is becoming the foremost part of their children's

learning. The ability of listening and speaking Chinese has become a primary task for their children to keep the Chinese language alive.

Chinese (language) is our root (Xin and Wen).

We want them become bilingual; we want them to know English as well as Chinese (Lily).

For Chinese, speaking Chinese is a must (Lala).

All parents addressed the importance of constantly speaking Chinese at home as the main way for their children to maintain Chinese. For children who spend most of their days speaking English, parent Xin said:

I think it is very important for them to learn how to speak and understand Chinese, understand what we are talking about, because probably they spend eight hours in the daycares and school, they hear English all the time, but the time they come back home, there are only a few hours before she goes to bed. It is very important to talk to them in Chinese and expect them to respond in Chinese.

Summary

Five participants specifically emphasised that literacy and numeracy learning plays an important role in assisting children's transition from early childhood to primary schools. All participants conduct educational activities and support their children's literacy and numeracy development by preparing a supportive environment and through parent-child interactions. In relation to children's learning experiences in early childhood settings, parents recognised that literacy and numeracy are integrated in art activities, such as songs and visual arts. Children freely choose activities to participate in. Teachers' practices are associated with the early childhood centre's philosophy.

In the last part, parents briefly talked about their ideas about preserving their home language and expecting their children to be bilingual. Parents have concerns regarding effectively preserving their home language without adequate support from schools and communities.

Overall, this group of parents' perceptions of children's literacy and numeracy acquisition are associated with their cultural values which are shaped by Confucian ideology. Some participants adapt their values of children's learning in the early years. They observe their children's learning progress and reflect on their parenting with both Chinese and New Zealand cultural values and practices to effectively facilitate their children's learning. Those ideas and values are constructed through their experiences in New Zealand early childhood education.

In the next chapter, I will discuss the key findings of the study compared with the relevant literature and studies. The discussion chapter consists of Chinese parents beliefs of learning; children's literacy and numeracy acquisition at home; parent-child relationship; and children's early childhood education setting learning experiences.

Chapter Five: Discussion of findings

This study investigated a group of Chinese immigrant parents' perceptions of their children's learning. Literacy and numeracy are two key areas to explore. Six Chinese parents – Wen, Ting, Xin, Gin, Lily, and Lala (pseudonyms) – attended face-to-face individual interviews. Three follow-up telephone interviews were conducted to further explore three participants' views on play in children's learning. Some findings of the study are congruent with previous studies, such as: Chinese parents uphold traditional Chinese values of learning that are rooted in Confucian philosophy; literacy and numeracy is facilitated before formal schooling to reinforce school preparation; Chinese parents fulfil their roles to support their children's academic attainment; participants emphasised the significance of maintaining their Chinese heritage and native language. Moreover, the study discovered that some parents identified that play is a powerful medium through which children develop literacy and numeracy skills in early childhood, and adaptation in Chinese traditional parent-child relationships is evident.

The following section with relevant literature and previous research will underpin how Chinese parents perceive their children's literacy and numeracy learning in the early years. This chapter is organised into four sections which are in line with the major themes emerging from the findings from the last chapter:

- Chinese parents' beliefs of learning
- Children's literacy and numeracy acquisition at home
- Parent-child relationship
- Reflect on children's early childhood education setting learning experiences.

Maintaining Chinese traditional values of education

Chinese traditional beliefs and values of education are largely influenced by Confucian philosophy, which has been rooted in Chinese history for several thousand years (Wu, 1985). A wide range of studies noted that Chinese parents place a high value on education (Brown & Iyengar, 2008; Li & Wang, 2004; Chao, 1996). The findings of the current study are consistent with those studies and indicate that the participants have high expectations of their children's education. They view education as a family obligation and a contribution to upward social mobility. "Chinese Asian highly value education" (Xin); "Education is a family matter for Chinese" (Li, 2001). Lily believed that "education is important to them (my children and to me"; and "education can make differences" (Lala). Overall, all the participants demonstrated their strong commitment to support and prepare their children to pursue academic excellence from early childhood.

Chinese immigrant parents maintain many traditional features of parenting values and practices. Respecting the traditions is significant in Chinese culture (Xu, Farver et al. 2005). Confucian classics early education work such as San Zi Jing reveals how learning is transmitted in traditional Chinese culture and has been used for educating children for a long time in Chinese history. Wang, Bernas and Eberhard (2002) advise that adults reinforce their beliefs through constant and deliberate interactions with young children. In this study, Parent Xin applied San Zi Jing in her parenting. She read San Zi Jing to her children and expects them to understand what is valued in Chinese culture. Xin takes the role of conveying traditional Chinese values and norms to her children through approaching Chinese traditional literature such as San Zi Jing at home:

养不教 To feed without teaching,

父之过 is the father's fault.

教不严 To teach without severity,

师之惰 is the teacher's laziness.

子不学	If the child does not learn
非所宜	This is not as it should be.
幼不学	If he does not learn while young,
老何为	What will he be when old.

(Wang, 2010)

Xin believed that introducing traditional Chinese values to young children is more significant in guiding them to work towards self-regulated learning than teaching them specific academic skills. The ultimate purpose of living is self-perfection, and learning focuses on innate character cultivation, according to Confucians (Wu, 1985). The importance of hard work and effort is addressed in the Chinese norm of training in education (Xu et al., 2005). The process of training is constructed upon the acknowledgement of the role of external forces in academic achievement (Wu, 1985). Aligning with Confucian beliefs of learning, the will to achieve and work hard are more valued than the learner's inner ability (Wu, 1985), and the traditional values of learning are transmitted and integrated in Chinese immigrants' parenting (Chao, 1996).

Children are trained to spend adequate time to acquire skills and maintain persistence in learning in Chinese culture (Wu, 1985). The eventual aim of training is to educate children to love learning (Brown & Iyengar, 2008). The desire of seeking knowledge contributes to forming the learner's intrinsic motivation (Chen & Stevenson, 1995). Gradually, self-regulated learning is achieved. Xin highlighted the importance for children to establish a learning habit from a younger age. Xin trains her children to take responsibilities in learning through scheduling her children's time to study regularly at home. She addressed the significance of having a good learning habit in children's schooling, and it is even more important than teaching them literacy and numeracy. Xin, however, was the only parent who showed great interest in incorporating Chinese traditional values into her practice with her children. Other parents uphold similar traditional values towards education, but they did

not emphasise details of how they employed traditional Chinese values in their parenting.

Learning, in terms of Confucian philosophy, focuses on moral character construction through which virtues such as filial piety, deference, politeness, loyalty, kindness and understanding are developed (Chao, 1995). Classic Confucian work has been applied to children's moral education for a long time in Chinese history (Li, 2001). The core values of being a good student and child are to be dutiful to his parents, be loving to his siblings and be cautious with people (Li, 2005). Current research shows that parent Xin particularly implemented *Di Zi Gui* and *San Zi Jing* to teach her children traditional Chinese moral standards. Moreover, Xin's comments reveal her expectations for her children to maintain traditional Chinese virtues, through which they develop a secure identity of being Chinese, because cultural identity is built upon understanding your own cultural heritage which is distinct from other cultural groups (Luo & Wiseman, 2000).

All participants stressed the importance of children's proficiency in listening and speaking in English. Similarly, according to Vygotsky (1978), the main function of language is communication and sharing information with others. Okagaki and Diamond (2000) advise that many Chinese immigrant children experience difficulties at school caused by the language barrier when they start school. Compared with skills of reading and writing, parents in this study put emphasis on children's oral language development. The capability of understanding and speaking English is viewed more critically in children's learning by parents Ting, Lily and Wen. According to those participants, oral English skills are closely related to children's confidence and self-esteem. Parent Ting felt her child is more competent in English reading than speaking. The findings support the study of Christy (2004), and indicate that reading and writing may bypass children's speaking for English as second language learners.

Moreover oral English proficiency is associated with children's social integration in this study. Social integration reflects the traditional Chinese value of collectiveness (Li & Wang, 2004), within the traditional Chinese value system, the continuous tendency of striving for interpersonal harmony and being highly

in tune to the feeling of others (Nisbett, 2003). In accordance with this view, Chinese parents rank socialisation as the top priority in the purpose of education. Research by Xu et al. (2005) investigated parents' views of the aim of education for their children. Surprisingly, most parents believe that developing knowledge which enables their children to function well in social relationships is more important than learning literacy and numeracy skills.

A similar study by Wang et al. (1999) indicates that social adjustment corresponds to a child's school performance. This study shows that children experience difficulty in building up social relationships with peers due to poor academic performance, which results in negative self-image. Xin shared her child's experiences in a new entrant class. Her child's underachieving at the beginning of primary school resulted in poor social relationships with peers and a negative self-image. It has been noted that children's academic achievement is positively associated with peer acceptance. This is congruent with the study by Li and Wang (2004) that academic achievement is attributive to social prestige and consistently affects self-image. Xin believes that academic excellence at school improves children's social relationships and fosters children's social integration. However, it has been recognised that many factors contribute to children's school relationships, including children's personality and social skills built up in early childhood (Goodnow & Collins, 1990).

Furthermore, Ting believes that being able to communicate and share common knowledge from the mainstream culture helps children become more confident, which results in better social relationships at school. She likes the idea of incorporating New Zealand culture in children's daily activities in early childhood settings. She maintained that those learning experiences provide opportunities for her daughter to gain a better understanding of mainstream culture and build up her vocabulary, and it reinforces her daughter's sense of belonging in the new environment. The learning experiences create more common topics for her daughter to share with her friends that foster her social relationships at school. Ting's view corresponds to the belief that Chinese immigrant parents prepare their children to understand both Chinese and New Zealand culture. Li (2001) suggests that immigrant children are expected both to possess cultural knowledge for acceleration of social acculturation and maximise the chance of

success in the host country for their children. The participants' attitudes towards the social integration of their children are embedded in Chinese cultural heritage and are responsive to the demands of the New Zealand sociocultural context.

Confucius-oriented educational values consist of upward social mobility (Li & Wang, 2004; Chao, 2001; Shek & Chan, 1999). Higher education may increase social positions for immigrants (Chao, 1995). Inevitably, immigration results in changes in traditional beliefs and values, but the pragmatics and core values that immigrants hold are subject to their life experiences in their original or host countries (Wang & Mao, 1996; Xu et al., 2005; Zhang et al., 1998). Henderson (2003) proposes that a high proportion of skilled Chinese immigrants with high qualifications, who come to New Zealand under the Skilled Worker category, experience difficulties in the job market (Henderson, 2003). Ip (2003) asserts that immigration is a stressful event, the stress for immigrants being derived from language barriers, cultural differences and unrecognised qualifications and previous working experiences. Although those difficulties are out of the scope of this study, Xin commented, as a member of minority group in society, that immigrant children need to work hard and surpass their local counterparts to have an equal opportunity.

In addition, all participants had degrees from their countries, but five of them chose to update their education in New Zealand universities to seek job opportunities. Accordingly, immigrant parents' concern about discrimination they encountered may impact negatively on their children's life (Huntsinger et al., 2000). Xin's view is coherent with previous studies by Chao (2001) and Li (2001), which state Chinese immigrant parents' expectations for their children's academic achievement correlate to their position as a minority group in the host country. Disadvantages they experienced as immigrants largely contribute to their higher expectations for their children's school performance. Consequently, they are actively involved in their children's learning to facilitate their school achievement.

Cuevas (1984) states that English as second language learners experience significant challenges moving across the home, school and community literacy context. Winsor (2007) points out that inadequate English with limited

vocabulary and comprehension skills hinder children's mathematic learning. The findings of the study consistently reported the participants' concern about the disadvantages caused by English as a second language in their children's schooling. That is a common reason why participants respond to the question of why literacy and numeracy are important for their children in early childhood education. Additionally, English skills are viewed as essential to understand teachers' instructions and socialising with others. For example, Ting said, "They need to understand the teacher's instruction." Moreover, language is critical to seek higher education (Li, 2006). Henderson (2003) suggests it is difficult for Chinese immigrants with limited English to socialise with others and actively participate in social lives out of their communities. English as a second language becomes a barrier to immigrants' full participation in the new country. Based on the negative experiences caused by English as a second language, naturally immigrant parents have concerns about any disadvantages in children's learning and development caused by English as a second language (Luo & Wiseman, 2000).

Literacy and numeracy are key skills for children to achieve at school. Children who start school behind in those skills are likely to stay behind (Rohl, 2006; Headington, 2001). Chinese parents pay great attention to their children's success and believe that school achievement leads to future success in society (Chen et al., 2004). Interestingly, in this study, Lily, Ting, Xin and Lala suggested that children should acquire some literacy and numeracy skills by age four, one year before school. Similarly, mainland Chinese children shift the emphasis to academic learning, including literacy and numeracy, from the age of five, one year before they start school (Vaughan, 1993). The coincidence of focusing academic learning one year before school in both the China and New Zealand context reflects that academic preparation for formal schooling is significant to this group of Chinese parents; nevertheless, Chinese early childhood education is housed in primary schools. Moreover, the findings are also in line with the study by Zhang et al. (1998) which Chinese immigrant parents view their roles as literacy mentors of their children and they believe early literacy acquisition significantly contributes to their children's school readiness.

Literacy and numeracy learning at home

Literacy

The participants believed that pre-writing skills, alphabet knowledge and being able to read simple sentences should be addressed in early education. Children's learning outcomes correlate to parents' beliefs (Brown & Iyengar, 2008; Li & Wang, 2004). Five participants expected their children to be able to recognise and write alphabet letters before formal schooling. The findings are consistent with existing literature (Rohl, 2006; Treiman, 2000) that affirms knowledge of the alphabet is significantly attributive to better reading and writing skills. Learners are less likely to develop awareness of phonemes in words without knowledge of alphabet names, the sound and shapes that are positively associated with later reading. However, all participants did not mention the letter-sound association which is an important aspect of phonetic knowledge. Chang and Treiman (2003) found that Chinese English learners rely exclusively on visual skills and rote learning to learn the English alphabet and neglect letter-sound relationships since the logographic method is the primary approach applied in Chinese learning.

Parents' beliefs largely influence their children's learning outcomes (Brown & Iyengar, 2008). They are involved in their children's learning and support them to acquire certain skills, depending on their cultural values. Literacy acquisition, like most human activities, is socially constructed (Whitehead, 2002; Gee, 2002; Adams, 1990). Home is a starting point in children's literacy development. Adams (1990) asserts that literacy is a fundamental social process that occurs through interactions between children and other people within their contexts, such as home and community. In the Chinese culture, a child's achievement is related to how much and how well parents fulfil their role (Chao, 1995; Goodnow & Collins, 1990). The present study indicates that all participants actively facilitate their children's literacy learning from different aspects such as preparing a literacy-rich environment, to modelling reading and writing at home.

A literacy-rich environment is essential to children's literacy acquisition in the early years. The significance of environment to a learner is addressed in abundant literature (Rohl, 2006; Whitehead, 2002). Furthermore, Confucius

proposes that the newborn is like blank paper, the environment she encounters eventually determines the image of the picture (Wu, 1985). Psychologists, scholars and educators continuously stress the critical role the environment plays in a child's development. Piaget (1962) proposes that the child constructs her learning through active exploration in the environment. Lev Vygotsky (1978) states that children learn through responsive interactions with people and places. In relation to children's literacy development, a quality home environment strongly correlates to higher performance on vocabulary, reading recognition and general knowledge (Adams, 1990). Home is the place where children begin to build up their interests and attitudes towards literacy. Resources and practices provided by parents demonstrate how they value literacy in their lives, and this largely contributes to their children's attitudes towards literacy (Whitehead, 2002).

All participants actively take a role in preparing a literacy-rich home environment to support their children's emergent literacy development in the early years. First, they provide ample literacy resources. Those participants invested in children's literature, pencils, paper and book shelves to prepare a supportive environment. In addition, participants utilise public services in the community to reinforce their children's learning. Participants take their children to visit local libraries on a regular basis. Secondly, parents instruct their children's learning. Participants incorporate children's literacy acquisition by: sharing stories; grasping the teaching moment to introduce new words or numbers; asking children to memorise some basic English words. Thirdly, parents integrate literacy learning in play and everyday life experiences, like providing knobbed puzzles for children to develop the skill of writing. Overall, environments prepared by the participants reflect that Chinese parents take an active role in supporting their children's learning (Li, 2006). This study suggests that all participants acknowledged that a supportive home environment promotes children's literacy skills.

Whitehead (2002) asserts that children brought up in a rich print environment actively make sense of print they encounter. Young children develop their emergent literacy skills when they are engaged in pretend reading and writing activities, attempt to associate print with spoken words and recognise some

words in their environment. All participants value emergent literacy and acknowledge that it is an important stage in literacy development. They support their children's emergent literacy development through purposeful socialisation when they encounter a meaningful opportunity in their daily events. Lily summarised that "a language-rich environment, parent-child interaction and parent instruction" are three main factors in reinforcing children's literacy development in early childhood. One of her examples was that a park walk with children could be a good opportunity for children to learn names of animals. Children's emergent literacy is facilitated through parent-child interaction.

The current study explores Chinese children's early literacy and numeracy learning experiences in their homes. Parents' beliefs and home practices of literacy learning are discussed in the above section. The following section explores parents' perspectives of numeracy learning in early childhood.

Numeracy acquisition

Participants have various expectations of children's numeracy acquisition in early childhood. Gin, Xin, Lily and Ting stressed that number skill and simple arithmetic are foremost knowledge in children's early numeracy acquisition. These skills foster children's numerical competence in logical operation of numerals from the three aspects. Firstly, number sense incorporates skills of association of objects with numerals (Headington, 2001). Secondly, counting consists of skills of identifying the number-word sequences and understanding cardinality; thirdly, number knowledge and computation skills are to solve arithmetical operations in a number format (Halford, 1995). Meanwhile, numerical skills referred to by the participants in this study also fit into the traditional Chinese mathematic learning pattern. Basic knowledge and skills are emphasised in early mathematics education in China (Wang & Mao, 1996). The participants had similar expectations of what children are supposed to learn in early childhood in China. Mathematical acquisition is socially constructed (Halford, 1995). Participants may construct their understandings of early numeracy learning based on their own cultural learning experiences, and they implement these ideas into their home practices with their children.

Nevertheless, in the first response to the question of expectations of early numeracy, all participants did not refer to the basic numeracy skills in sorting, comparing and problem solving which are highlighted in children's early mathematic learning according to constructivist developmental perspectives developed by Piaget (Piaget, 1962). But later findings demonstrate that participants actively construct their children's numeracy knowledge through different approaches. For example, Gin and Lala facilitated the skill of measuring by encouraging their children to be involved in baking and gardening activities at home. However, the participants demonstrated diverse understanding about the same activity; parent Xin felt that it is not very safe for young children to step into the kitchen and life experiences could be accumulated later. Exploring the reason for Xin's perception, despite safety issues for the children, it might be attributive to her understanding of play and learning. She distinguished study from play. "Play is different from learning", in line with traditional Chinese perceptions of play and learning, through which play is viewed as relaxation. It is revealing that the participants coming from Chinese backgrounds uphold different views on the baking activity, which reflects that education is an individual matter that reveals values and practices subject to individual beliefs and personal experiences (Rogoff, 2003).

Chinese parents' expectations of children's literacy learning are associated with their children's age, but not only age. In this study, participants who have school-age children focus on basic literacy skills for reading, writing and simple arithmetic. With a daughter just turned three years old, Lala chose more play-orientated activities, such as puzzles and sharing stories to extend her literacy learning. In addition, Gin suggests it is not appropriate for adults to judge a child's literacy and numeracy skills, depending simply on her chronological age, without considering the child's previous knowledge. Similarly, Xin recommended that parents should carefully observe their children's readiness for literacy and numeracy learning. Children's interests and responses to print and numerals are indicators of readiness to learn.

It has been acknowledged that numeracy acquisition corresponds to cultural influences such as parental involvement (Anonymous, 2001; Aunio, Aubrey, Godfrey, Pan, & Liu, 2008; Campbell & Mandel, 1990). Costello (1991) points

out those mathematical concepts, such as number sense, become meaningful for preschoolers if learning experiences are incorporated in children's play. A child who is frequently engaged in mathematic experiences has confidence in maths learning (Headington, 2001). Playful learning experiences for young children contribute to their maths confidence and avoiding anxiety (Halford, 1995). The relevant findings of this study indicate that five participants frequently integrate maths learning with familiar life experiences for their children at home. All participants continuously demonstrated understanding of young children's various cognitive developmental stages and their capacity to understand.

Memorisation has been a traditional learning strategy in Chinese culture. In ancient times, young Chinese children were required to memorise classic Confucius work to begin their journey of learning, such as *San Zi Jing*, which consists of maths concepts such as numerals and directions (Wang, 2010). In order to underpin rote learning in children's numeracy acquisition from a cognitive perspective, it needs to be acknowledged that children develop their mathematical skills from two levels. The first level is referred to as instrumental understanding and the second level is relational understanding (Costello, 1991). Learners at the first level are equipped with knowledge and skills of what to do and how to do it, but they haven't developed in-depth understanding of the reason why the procedure works. Rote and functional learning at this level contributes to better learning outcomes, but the strategy is questioned because that might decrease children's independence to teacher's instruction and only serves basic maths learning (Costello, 1991). Xin's ideas are in line with the literature: She explained that number concepts can be introduced to children in different forms, but the child still needs to memorise the cardinal sequence in the correct order. She believes that rote learning is attributed to children's early numeracy development. Similarly, she applied the strategy in her children's vocabulary building. Rote learning is applied to form a solid foundation of learning knowledge in Chinese culture, through which learners develop abilities to understand, question and modify the previous knowledge (Li, 2003).

By contrast, other participants view daily happenings and play as valuable numeracy learning experiences for young children. Participants regularly count

with their children at home. Lala invites her child to count when they are climbing stairs or baking cookies. Gin provides her daughter with opportunities to count and measure when they do gardening together. Additionally, participants integrate numeracy acquisition in children's play. Ting plays the game "hide-and-seek" with her children at home to foster her children's counting skills.

Compared with traditional instruction learning and didactic teaching methods applied by Chinese parents, numeracy learning strategies employed by the participants are more attributive to Western contextualised mathematic learning approaches for younger children. Examining the reasons why this group of parents perceive life experiences are valuable in early numeracy learning, Gin commented, "Maths is everywhere." Participants recognised that familiar life experiences make maths learning meaningful for their children. That is consistent with Costello's (1991) view that young children gain more understanding of abstract maths concepts when they are involved in concrete learning experiences.

The role of language in mathematic learning has been explored in a large body of literature (Ng & Rao, 2010; Winsor, 2007; Zhou, Peverly, & Lin, 2005; Cuevas, 1984). The positive relationship between literacy skills and mathematics is supported by literature (Seung-Hee & Samuel, 2006). Student's mathematic performance is particularly associated with their comprehension skills (Ng & Rao, 2010). English as second language learners encounter particular difficulties in mathematic learning due to limited vocabulary (Cuevas, 1984). In the meantime, mathematic concepts are constructed differently within various linguistic systems (Ng & Rao, 2010). Zhou et al. (2005) assert that place value is much clearer in Eastern languages, such as Chinese, Japanese and Korean, than in English. The present study indicates that some immigrant children experienced challenges in understanding mathematic concepts with English as a second language. Xin's child sometimes felt confusion in presenting mathematic ideas in Chinese and English, for example, telling the time in English and Chinese is different. In Chinese, hours come first, minutes follow; such as five past five in Chinese is five 0 (zero) five. In addition, clear explanation about mathematics concepts assists children to conceptualise the

ideas and enhance their understanding (Ma, 1999). Winsor (2007) advises that mathematic concepts are more precise in a person's natural language than in the second language. The findings of this research are congruent with this idea, as most participants feel comfortable in facilitating their children's numeracy learning in Chinese at home.

Dynamics of learning

Ip (2003) proposes that Chinese immigrants come to New Zealand for alternative lifestyles and their children's education. Li (2001) points out that immigrant parents adapt some beliefs of child rearing in the host country after immigration. Ji and Koblinsky (2009) suggest that with the influence of Western child development theory, Chinese parents' beliefs about education have gradually changed. Exam-oriented education systems have been questioned by both Chinese parents and educators (Li, 2004). Chinese immigrant parents felt the workload in China is too stressful for children (Li, 2004).

All participants view literacy and numeracy as important skills for children to succeed at school. The findings of the study indicate that parents apply different strategies to reinforce their children's learning based around their understanding about children's learning in early childhood. Some participants select play-based activities to enhance their children's literacy and numeracy acquisition, whilst one participant highlights traditional features of learning, such as rote learning and vigorous practices.

The study illustrates that culture is a dynamic phenomenon. Although traditional Chinese families are largely shaped by Confucian ideology, gradual changes have occurred not only in immigrant families but also in the countries of origin (Wang & Mao, 1996). Scholars (Rogoff, 2003; Siraj-Blatchford & Clarke, 2000) remind us there is no truly timeless tradition; we should avoid forming generalisations about cultures without considering the dynamic nature of culture. The present study reveals that participants adapt their conceptions of young children's learning when they are exposed to Aotearoa New Zealand culture. Both traditional Chinese parenting patterns and popular New Zealand mainstream norms of early education, such as play, are transmitted to their home activities for their children.

Academic learning and play

Play and learning are separate norms from traditional Chinese perspectives (Parmar, Harkness, & Super, 2004). Play in Confucian value refers to learning instruments or playing chess and serves the main purpose of cultivating sentiment (Bai, 2005). In this study, play is a recurring theme throughout the participants' practices with their children with respect to literacy and numeracy learning. Participants regard play as an appropriate learning approach for young children. They explored more about the contribution of play in their children's learning from two aspects. Firstly, parents believed that children build up their social skills through play with others. "They communicate with their friends, learn how to deal with other children; social skills are important for their schooling" (Wen). Secondly, children are happy when they play, and play enhances their emotional well-being. This finding is consistent with other research by Liao (2007, p. 104) which indicates that 65% of 84 Chinese immigrant parents believe emotional well-being and physical health are more important than academic performance for their school-age children. Thirdly, play is valued as meaningful in young children's literacy and numeracy acquisition. Lily taught her children new words when they went for a walk and saw some ducks; Lala extended her children's fine motor skills for writing, such as holding the pencil, through playing with the knobbed puzzles; likewise, Ting views 'hide-and-seek' as a valuable game for her children to practise counting; Wen pointed out, "When you see them play, actually, they learn a lot."

Human learning has been approached from many perspectives. Literature explores children's ability to learn and the process of learning (Piaget, 1962; Vygotsky, 1978). The beliefs of learning are not innate but develop through the process of individual socialisation (Bronfenbrenner, 1979). Learning in Chinese culture emphasises the inner cultivation of the human capacity for goodness oriented by self-perfection (Li, 2003; Wu, 1985), while learning, according to the Western model, leads to understanding the essence of the given topic, developing personal insight and creative problem solving (Li, 2003).

Evidence indicates that various cultural beliefs influence how individuals learn in their respective cultures (Shek & Chan, 1999). Children in the United States are

socialised relying on their curiosity or interests; they show more mental independence and focus on developing their creativity inspired by their intrinsic motivation, whilst they show less patience and persistence than Japanese children (Lim & Lim, 2003). In Eastern cultures, persistence is an important indicator that predicts a child's school achievement (Francis & Archer, 2005). Gin shared her daughter's piano practicing story. She indicated that her daughter felt proud when she was chosen to play in a school concert. The finding supports the view that Asian immigrants value success as the best reward of effort (Li, 2004). Gin explained that children should be provided with a wide range of opportunities to develop their interests, but they might not be capable of identifying their interests in the beginning. Persistence is important for long-term achievement.

Parent-child relationships

In accordance with a Confucian perspective, Chinese children are expected to respect and obey parents, older siblings and other senior members. Chao (1995) suggests that reciprocal expectations exist between parents and children. Children are expected to be respectful and obedient; parents need to fulfil their obligations to provide appropriate instructions for their children, through which cultural norms and values are passed along (Chao, 1996). The parent-child relationship in traditional Chinese culture is represented in a hierarchy status (Lim & Lim, 2003). Chinese parents take the role of instructor and caretaker, and children are expected to obey without question (Ho, 2001; Li, 2004; Chao, 1996). Chinese parents are observed as having more control of their children in many studies (Brown & Iyengar, 2008; Lin & Fu, 1990). However, Chao (1994) argues that Chinese parents fulfil their child-rearing abilities through the process of "govern" and "love". Chinese parents sacrifice their personal lives to support their children to achieve; also they tend to maintain a close and harmonious relationship within families. Moreover, immigration has a large impact on parent-child relationships. Immigrants adapt some traditional values to the dominant culture to enhance their children's social acculturation. Xu et al. (2005) suggest that, compared with mainland Chinese mothers, American Chinese mothers and American European mothers demonstrated less control in parent-child relationships.

The findings of the present study demonstrate that the participants acknowledged that their children share power with parents. “Sometimes, they (children) want to control you” (parent Lala). Ting, Wen and Gin showed they allow their children to make decisions in their learning, and they take the role of supporters rather than directors. “I want them to learn what they like to learn, not what I want them to” (Ting). Ting and Gin view themselves as playmates to their children and equally share power through play. “She leads the activity sometimes.” In relation to participants’ own experiences with parent-child relationships, Lala reflected, “My mum was strict to me when I was a child; I was not allowed to jump when I was little to keep me safe.”

However, the correlation between the parent-child relationship and parents’ own experiences is not clear and can be explored further. Interestingly, five of the six parents did not mention the core value in Chinese parent-child relationships placed in the traditional Chinese value system that is, “piety”, that children should feel dutiful towards their parents. It might be attributed to how Chinese parents group their expectations according to children’s age and the participants’ children are still young.

In this study, all the participants value Chinese learning as fundamental to their children’s construction of their identities of being Chinese and the importance of language skills. The parents explored their thoughts of Chinese learning in the New Zealand context.

Maintain Chinese beliefs

Language capability is crucial to succeed in society (Zhang & Slaughter-Defoe, 2009; Liao, 2007; Luo & Wiseman, 2000; Li, 2001; Martine, 1999). Proficiency in English is essential to immigrant children’s school achievement and later employment (Christy, 2004; Luo & Wiseman, 2000). To maximise children’s success, immigrant parents pay close attention to their children’s English learning (Zhang & Slaughter-Defoe, 2009). Nevertheless, many Chinese parents expect their children to maintain their cultural heritage and preserve the Chinese language. Ethnic language is an essential aspect to reflect an ethnic group’s identity. Immigrant families develop a secure understanding of themselves as ethnic individuals through conserving their first languages

(Martine, 1999). A well-established self-identity assimilates the positive image of who they are (Christy, 2004). Chinese immigrant children often feel lonely due to being away from their social ties in their home country (Martine, 1999). Therefore, Chinese immigrant parents tend to support their children to be competent in both languages. They face challenges to learn Chinese within a dominant English social context and with the minority language being devalued (Luo & Wiseman, 2000).

All participants constantly speak Chinese at home to support their children to maintain Chinese. Towards the journey of being bilingual, findings of this research indicate that all parents share a common view that children should be able to speak and understand the Chinese language. Being Chinese is fundamental to maintaining Chinese heritage and identity (Li, 2001). Parents in this study uphold a strong belief in maintaining the Chinese language. Consistently speaking Chinese and reading Chinese stories are main strategies for these parents to facilitate their children's Chinese acquisition. But participants are concerned about preserving their Chinese language in New Zealand. They found it is inadequate for children to maintain their native language without support from communities and schools. Limited resources are available for their children to learn Chinese. It is a dilemma for participants to keep a balance in learning both English and Chinese effectively. Moreover, Xin found sharing the workload between Chinese and English is tricky, and it is difficult for her children to achieve in both languages. As Clark (2000) points out, it is uncommon for language learners to achieve equally in the first and the second language.

Reflections on literacy and numeracy in early childhood settings

The study examined parents' views on their children's early childhood learning experiences. As one criterion of the study, all the participants' children have or had New Zealand early childhood learning experiences. Participants have acknowledged the play-based curriculum in New Zealand early childhood education. With commitment to play-based early childhood learning experiences, Wen, Ting, Lala, Lily and Gin all believe that children's physical and social emotional learning are supported through play. Additionally, Ting

viewed early childhood centres as windows for them to approach the New Zealand culture for their children as well as them.

However, in relation to literacy and numeracy learning, parents felt that they were not sure about what literacy and numeracy knowledge is covered in early childhood. Xin said, “I am not sure what they suppose to learn and whether the teachers know what they should teach.” Lily recalled her child learning the alphabet in the centre: “They taught one letter each week, incorporated with songs, pictures; for example children drew aeroplanes when they learnt ‘a’.” Lala reflected that a play-based curriculum is common in New Zealand while literacy and numeracy acquisition in each centre largely relies on individual teachers’ practice with children, and teachers’ practice is associated with their beliefs of children’s literacy and numeracy learning. Only sensitive teachers who carefully observe children and plan appropriate activities can effectively facilitate children’s literacy and numeracy acquisition.

Generally, five participants are positive about their children’s learning in early childhood education settings. Wen, Ting and Gin affirmed that child-centred and play-based early childhood environments enhance children’s positive self-images and social relationships. Children are empowered to freely explore the environment and construct their own learning through engaging in a variety of learning experiences (Ministry of Education, 1996). In this study, participants’ children’s literacy and numeracy learning experiences in early childhood settings are mainly associated with play.

In fact, literacy and numeracy are important learning areas outlined in Te Whāriki (Ministry of Education, 1996). Specific learning outcomes in mathematics, language and literacy are woven through all strands (Ministry of Education, 1996). Teachers are expected to effectively scaffold children’s literacy and numeracy in their teaching practices (Educational Review Office, 2009). It seems participants have less understanding about the early childhood curriculum, and Xin questioned whether early childhood teachers have a specific profile of the content of children’s literacy and numeracy learning in early childhood. Furthermore, Lala showed her concerns about that teachers may implement various practices to support children’s literacy and numeracy

learning, based around their perceptions of young children's learning and the centre's philosophy. McLachlan et al. (2006) point out that insufficient teaching scaffolding in the educational settings inhibits children's early literacy development. Two causes may result in parents' limited understandings of their children's literacy and numeracy learning in the early childhood settings. First, participants might be less involved in their children's early childhood centres to gain information about their children's learning. Second, Chinese parents naturally take the responsibility of supporting their children's learning at home but not relying solely on children's schooling (Chao, 1996). The language barrier and traditional values of respecting the authority of teachers' teaching may also hinder their involvement in early childhood settings (Dyson, 2001). Furthermore, Chinese parents might believe that formal learning starts from primary school; academic learning is not the focus in early childhood, consequently they are not keen to be involved in children's learning in early childhood. Lim and Lim (2003) suggest that Chinese parents dramatically raise their involvement in children's learning when they start school.

Summary

This chapter discussed Chinese immigrant parents' expectations of their children's literacy and numeracy learning with Confucian ideology and Western development theory as the backdrop. Generally, the findings of the present study suggest that traditional Chinese values on learning and education largely impact on immigrant parents' perception of literacy and numeracy acquisition in this period. Participants believe that literacy and numeracy learning is essential in school preparation, in particular for the English as second language minority group. Nevertheless, various practices are applied by participants to facilitate their children's literacy and numeracy at home.

Individuals "taking a stand on the culture of one's community, socially construct and transform knowledge at various levels (Packer & Goicoechea, 2010, p. 228). In relation to the current study, despite one participant continuously applying traditional Chinese learning strategy, such as emphasising practice to facilitate their children's learning, it is evident that the other five participants developed some insight into play and play-based learning experiences in early

childhood. I further explored parents Ting and Wen, who place significant value on play, through the follow-up telephone interviews. Wen explained that he believes a happy and healthy childhood is essential to children's holistic development; play reinforces their emotional and physical well-being. Ting was involved in a play centre for a year; she developed her understanding of play in children's learning through her experiences with children and other parents in the play centre. It is revealing that individual participants acquire and construct their beliefs, values and thoughts through interactive communications with the environment and others (Rogoff, 1998).

Participants' home educational activities, in relation to their children's literacy and numeracy learning, reveal both Eastern and Western values and beliefs of learning. Chinese immigrant parents in this study evaluate their own culture and the mainstream culture and walk on a two-way path to maximise their children's success and nurture their emotional well-being. It is consistent with Li's (2001) study that Chinese parents believe that education in China fails to nurture children's well-being and overstates children's school performance and develops children's multi-intelligence. The present study indicates that this group of Chinese parents adapt some cultural practices to create their own home pedagogy to reinforce their children's learning and development, based on their individual conceptions of children's learning. Drill and lectures are seldom used by this group of parents in their children's early learning. Emphasising the role of memorising in knowledge attainment in Chinese children's learning was not stressed by most participants (five of the six). The participants showed more interest in their children's social development, moral education and oral English acquisition than literacy and numeracy acquisition in the early years.

Chapter Six: Conclusion

This qualitative study explores Chinese immigrant parents' perceptions of literacy and numeracy acquisition in early childhood. Six participants – Xin, Wen, Ting, Lily, Gin, and Lala (pseudonyms) – voluntarily participated in this study. The data were gathered through face-to-face individual interviews and follow-up telephone interviews. This chapter begins with the statement of the main objective of the research and summary of the main findings. The strength and limitations of the study are discussed, followed by the potential contribution of the current study and implications for teaching practice.

Review of the key findings

This research sought to investigate Chinese immigrant parents' perceptions of their children's learning in early childhood, particularly literacy and numeracy. The key findings of Chinese parents' perceptions of children's literacy and numeracy learning that emerged in this study can be grouped into three key themes: Chinese parents' beliefs of education; involvement in children's learning; and evaluation of literacy and numeracy learning experience in early childhood education settings. In the following section, I focus on addressing the questions described in the first chapter.

How do Chinese immigrant parents perceive children's learning in early childhood?

MacNaughton (2006) suggests that a child's learning and development is initially influenced by the social situation which is determined by the sociocultural context in which the child is embedded. In this study, all participants believe that education is crucial for their children, and their beliefs are grounded in traditional Chinese culture and circumstances of being a member of a minority group in New Zealand. Li and Wang (2004) propose that Chinese parents sustain many traditional features of values and beliefs of education from Confucian perspectives. Confucians believe that people fulfil self-perfection through consistent learning, and academic achievement honours

the whole family (Wu, 1985). Despite the influences of traditional Chinese beliefs on education, Chinese immigrant parents raise their expectations for their children's school achievement due to their social situations in the new country (Li, 2004). They expect their children to excel in schools to cope with the disadvantage of being a minority social group. Accordingly, they construct their home practices to support their children to achieve in schools through extensive involvement in their children's learning.

Chinese immigrant parents in this study conceptualised children's learning in early childhood upon Confucian philosophy, with adaptations in relation to the influences from the dominant Western culture that they are exposed in Aotearoa New Zealand. An ideal child in Chinese tradition needs to respect parents, have good manners and optimal academic performance (Xu et al., 2005). In the model of a "good child" from a Confucian perspective, traditionally, Chinese children are required to obey parents. Chinese parenting is labelled as firm with a high level of control (Lim & Lim, 2003). Parent-child interactions are more likely in formal and didactic ways.

However, culture, as a way of life, comprises an adaptation to external conditions (Rogoff, 2003). Rogoff (2003, p. 58) suggests "we see a glimpse of a moving picture involving the history of the activities and the transformations towards the future in which people and their communities engage". Li (2004) found that Chinese immigrant parents adapt and accommodate their culture to enhance their children's social acculturation after they start their lives in the new country. This is congruent with Lim and Lim's (2003) study that parental control is less significant among Chinese immigrant parents than the parents in China. Ip's (2003) study suggests that Chinese immigrants come to New Zealand to seek better lifestyles for themselves and their children. Throughout the study, children's well-being, social skills and moral orientation are seriously considered by parents. This is coherent with Chao's (1994) study, that Chinese immigrant parents take on the role as caretaker in their children's lives, that is different from the previous research through which Chinese parenting is labelled with firmness, discipline and unquestioning obedience. The current study also reveals that Chinese immigrant parents shift the role of directors to responders

to their children's needs at home. All participants are engaged in their children's learning in a form of facilitation rather than taking control of their learning.

How do parents think about literacy and numeracy learning in early childhood?

Five of the six parents believe that children need to learn literacy and numeracy skills in early childhood in the interest of school preparation, yet disparities exist in parents' practices implemented at home to facilitate their children's literacy and numeracy acquisition. Some parents implement traditional Chinese learning strategies, such as rote learning and instructive learning, to facilitate their children's literacy and numeracy development, while others prefer play-based and child-initiated learning activities.

School readiness

The participants stress that the main reason that children attain literacy and numeracy skills is for school preparation, owing to their concerns about English as a second language. Five participants suggest that children need to start to learn basic literacy and numeracy at age four, one year before primary school. Participants pay more attention to their children's literacy development than numeracy acquisition. Chinese immigrant parents view English as one of the most important learning areas for their children from a second language background (Xu et al., 2005). Clark (2000) suggests that all children are fluent in their first language, but not automatically competent in their second language attainment. Okagaki and Diamond (2000) assert that the major difficulties for learners from minority language background are the tasks of code-switching from the language at home to the language at school. In this study, participants believe proficiency of English is vitally important for their children's educational success.

What literacy and numeracy knowledge should be learnt in early childhood?

The findings of this research suggest that parents support their children's emergent literacy through preparing a literacy-rich environment and engage their children in literacy learning through parent-child interactions. With respect to explicit skills in literacy and numeracy learning in early childhood, parents

highlight alphabet knowledge and attainment of vocabulary in their children's early literacy acquisition. Children are expected to write their own name and read simple sentences before formal schooling. In regard to numeracy development in early childhood, participants consider that number sense, counting up to 20 and backwards, recognising numerals and simple computation skills are essential.

The participants' expectations of children's literacy and numeracy learning are slightly different from early childhood educators' expectations of two learning areas as evidenced in a New Zealand study by Wylie, Thompson and Hendricks (1996). With respect to numeracy learning in early childhood, Wylie et al.'s (1996) study indicates that early childhood teachers expect children to be able to "rote count from 1 to between 5 and 20" and children are expected to "understand basic concepts in relation to weight, place, size, position" by age five (p. 22). In relation to literacy learning, early childhood teachers expect children to "know the letters are symbols. Understand that text has meaning, recognise their names, write or attempt to write names" by age five (p. 23). The findings of the current study reveal that this group of Chinese parents emphasise the explicit skills of literacy and numeracy while New Zealand early childhood educators focus on enhancing children's holistic numeracy and literacy acquisition through daily happenings and events and children's play. Moreover, it has been acknowledged that children develop mathematic understanding at various rates and there are not necessarily any age-related expectations in mathematic development in the early years (Halford, 1995). In contrast, the Chinese parents in this study demonstrated more age-related expectations which are associated with school preparation, although they acknowledged that individual children's readiness for literacy and numeracy learning needs to be considered.

How do parents facilitate their children's literacy and numeracy acquisition at home?

Literacy

The present study demonstrates that all participants believe children's literacy development is facilitated in a well-prepared environment. A literacy-rich

environment consists of ample literacy resources, and parents act as a role model by reading and writing in front of their children. Parents engage their children in literacy learning through interaction, story reading and assigning learning tasks. Cairnery (2002) suggests that, in spite of a supportive print-rich environment, sufficient adult instruction remarkably enhances children's literacy development. All participants acknowledged that environment and parent instruction are two key factors which reinforce children's literacy attainment in the early years. Participants value child-initiated learning experiences and believe children learn better if they are curious to explore. Parents play a role of facilitators as well as instructors through emphasising what children may learn from the experience.

However, Chang and Treiman (2003) point out that bilingual learners transmit the strategy from the first language to the second language. Chinese learners rely largely on rote learning to acquire English letters and words because the logographic approach is primarily applied in Chinese learning, but the letter-sound correspondence is not addressed. In current reserach, five participants emphasised the importance of recognition of letter names and being able to write alphabet letters but not letter-sound correspondence in early English acquisition. Rohl (2006) proposes that knowledge of letter names and sounds of letters forms the foundations of learning to read. Nicholson (2002) asserts that children begin to build up fundamental skills to decode the spoken sound in written language through matching letter sounds with letter names. However, parents in this study feel that they are not very confident to assist their children's English learning from a second language background. How Chinese parents view the correlation between letters and sounds could be further explored in future research.

Five participants said it is important for their children to develop reading and writing skills in English as well as listening and speaking. They believe that oral English proficiency directly relates to their children's formal school learning and social relationships in schools. The ability to understand teachers' instruction and socialising with peers and teachers draws more attention from Chinese immigrant parents in this research. This responds to the high expectation for social integration in Eastern culture. Traditionally, functioning well in social

relationships is highly valued in Eastern cultures, and Easterners are more concerned with fitting into society (Nisbett, 2003). Parents emphasise the importance of oral English in their children's literacy development since they believe it is the foremost skill to facilitate social integration.

Numeracy

Zhou, Peverly and Lin's (2005) study indicates that Chinese parents more frequently engage their children in mathematic activities, such as counting at home, than United States mothers. The participants' expectations of early numeracy acquisition are in accordance with mathematic learning in early childhood education in China, where children are expected to grasp number skills, counting, simple addition and subtraction in preparation for school (Wang & Mao, 1996). The participants employ various strategies to enhance their children's numeracy development. One participant considers that rote learning and structured learning experiences are critical for children to establish a solid mathematic foundation in the early years, yet other parents incorporate counting and arithmetic into daily life experiences such as baking and gardening. Both instructional learning and a child-initiated learning approach are applied by these parents.

How do parents think about their children's literacy and numeracy learning in early childhood settings?

With regard to literacy and numeracy acquisition in early childhood education settings, the participants perceive that early childhood educators focus on pre-reading and pre-writing learning through playful activities, such as incorporating letters in drawing and songs. Numeracy is integrated in the physical environment in the form of display of numbers and nursery rhymes (parents Lala and Ting). Participants are, however, uncertain about the specific learning outcomes outlined in the early childhood curriculum and other strategies employed by teachers in facilitating young children's literacy and numeracy development. Some participants consider that early childhood teachers' practices are associated with their professional knowledge and willingness to support children's literacy and numeracy learning, and that is greatly influenced

by teachers' beliefs of what children should learn in early childhood and how they achieve their learning.

Carr and May (1996) proposed that the New Zealand early childhood curriculum Te Whāriki (Ministry of Education, 1996) brought in more holistic and integrated philosophical approaches to change traditional views of explicit learning experiences in early childhood education. The flexibility of the core concept of Te Whāriki (Ministry of Education, 1996) allows early childhood settings to weave their own philosophy within the broad framework. Early childhood educators are expected to go beyond the words of the document and view children's development in a broad picture (Carr & May, 1996). Nevertheless, Te Whāriki does not prescribe content or method in teaching, but allows great flexibility for the teacher to construct their teaching practices based upon extending individual children's diverse learning needs (Alvestad, Duncan, & Berge, 2009). Lee (1996) notes that how a centre proceeds with its planning process to implement Te Whāriki is very much an individual choice and largely influenced by the centre's philosophy.

The following section reflects that the participants actively construct their values, beliefs and practice with regard to their children's learning within the New Zealand social context. This study demonstrates that education is socially constructed and significant informal learning occurs in individual families where parents become actively involved.

Changes in parental beliefs

Parental beliefs are considered an important factor thought to influence their children's learning (Li, 2004; Chao, 2001). Parents support their children to acquire certain educational skills according to their sociocultural identities (Goodnow and Collins, 1990). Confucian philosophy, by and large, impacts on Chinese perceptions of education and learning (Chao, 1994). A growing body of studies (Chao, 2001; Li & Wang, 2004; Ji & Koblinsky, 2009) indicate that Chinese parents uphold strong beliefs in education which primarily contribute to their children's academic success. The findings of the present research are congruent with the previous studies, that participants value education as a

powerful means for their children to fulfil self-perception and succeed in society (e.g. Chao, 1996). However, participants conduct various educational activities to facilitate their children's literacy and numeracy acquisitions at home. Some participants hold stronger traditional Chinese beliefs than others. The participants who sustain traditional Chinese beliefs of education are more likely to reinforce their children's understanding of traditional Chinese values and moral standards at home. Their home practices consist of providing opportunities for their children to approach classic Confucius work, such as San Zi Jing; they schedule time for their children to study at home and intend to help their children achieve self-motivated learning through establishing a learning habit (routine for studying).

However, many scholars argue that the stereotype of Chinese immigrant parents' beliefs rooted in Confucian perspectives tends to eliminate Chinese immigrants' recognition of social barriers rather than their cultural norms (Li, 2001). The findings of this study support that the participants highly value education and also note the disadvantage of being a minority group which then raises their expectations for their children's academic achievement.

Rogoff (2003) points out that culture is dynamic. Parents in this study demonstrate basic patterns of beliefs and values as a Chinese cultural group, but the findings also reveal substantial differences in individual family practices with their children. For example, parents Ting and Wen discovered that play enhances young children's intelligence, social skills and emotional and physical well-being. Culture is less stable and more situational and actively constructed (Rogoff, 2003). The findings of the study suggest that parents acknowledge the value of play in young children's learning, which is different from traditional Chinese assumptions of play in traditional Chinese education, in which play and physical activities are separated from intellectual learning and play is viewed as relaxation and enjoyment (Bai, 2005). On the other hand, parent Xin explained memorising maths facts contributes to a higher level of mathematic understanding (Halford, 1995). Other parents employ a mixed method from both Western and Eastern perspectives to support their children's learning at home after they have evaluated the pros and cons of the two cultural strategies.

Strengths and limitations of the study

I believe that the strength of this study is its significant contribution to New Zealand literature on Chinese immigrant parents' beliefs of children's literacy and numeracy learning embedded in families. Particularly, the research provides various pictures of Chinese immigrant children's literacy and numeracy acquisition at home. Parents construct their home educational activities based on their conception of children's learning (Goodnow & Collins, 1990). This may inform early childhood educators' teaching and provide culturally responsive educational practices to meet Chinese immigrant children's learning needs in the early childhood sector. Methodologically, qualitative research focuses on exploring the concepts of meaning (Bogdan & Biklen, 2007). This study has provided an opportunity for a small group of participants to share their lived experiences, ideas and beliefs about their children's learning in depth.

However, there are inevitable limitations of the study. The first is generality. The strength of the approach of this study also results in some limitations. The current qualitative study explores a group of immigrant parents' experiences of facilitating their children's literacy and numeracy within the New Zealand context. The research attempts to provide some insight into the research question rather than to generalise. From the small size of the study, the findings might be applicable to immigrants who have similar backgrounds back in China. In this study, five participants immigrated to New Zealand under the general skills category during 2000 to 2002. They have high qualifications in their home country. Henderson (2003) indicates that eligible immigrants are assessed, based on points, on their qualifications, experience, age and so forth, and their score needs to meet the pass mark. Five participants are in their thirties and have lived in New Zealand for more than six years. Thus, the findings of this study might not be applicable to participants who have come to New Zealand at a younger age or to some newly settled Chinese immigrants.

Implications of the study

In Aotearoa New Zealand, early childhood educators are required to work with parents in partnership (Ministry of Education, 1996). Increasing cultural and linguistic diversity poses challenges for educators to adapt their teaching to

work collaboratively with parents. Te Whāriki (Ministry of Education, 1996) states that children's cultural backgrounds need to be valued and respected by early childhood educators. Chinese immigrant children's valuable literacy and numeracy learning experiences within the New Zealand context provided in this study may enhance early childhood educators' understandings of Chinese children's knowledge and learning styles which they bring to the educational context. This enhances the family-school information exchange between early childhood educators and Chinese parents. Additionally, this study suggests that parents hold different values of children's learning nurtured in their individual environments even though they come from the same cultural background.

Harkness and Super (1996) argue that culture prized practices and child educational outcomes are theorised in literature, which results in the acceleration of children's competence in culturally marked areas but development in other domains lags if it has not been recognised. In this study, parents felt they lacked confidence and skills to tutor children's literacy as a subject. In fact, some strategies the parents applied to facilitate their children's literacy learning, such as memorising letter names, might be broadened through introducing the principle of alphabet or letter-sound relationships and making connections between speech and print through games instead of rote learning (Rohl, 2006). Drill, lecture and formal instructional teaching are not appropriate for pre-school children (Shonkoff and Meisels, 2000). Early childhood educators can work with Chinese parents and help them gain more knowledge of children's early literacy and numeracy development to enhance their home learning.

Early childhood educators need to acknowledge immigrant Chinese parents' concerns about their children's learning. Chinese immigrant children experience difficulties when they start school because of their poor English (Zhang & Slaughter-Defoe, 2009). Li's (2006) study suggests Chinese children with limited English fail to form friendships with their peers. Overlooking Chinese children's language learning ability and assuming they will automatically develop English skills in an English-speaking environment, without providing any specific support from early education, may inhibit Chinese children's educational outcomes and social relationship development.

In relation to numeracy learning, most participants focus largely on number skills in early numeracy acquisition, such as counting forward and backward, addition and subtraction. The New Zealand curriculum: Mathematic Standards for years 1–8 (Ministry of Education, 2009, p. 12) states “strong understanding of number is vital if students are to succeed in mathematics. For this reason, the expectations for number are the most critical requirement for meeting a standard”. All parents apply contextualised numeracy learning experiences for their children. Everyday life experiences become the most important medium for their children to attain numeracy knowledge. However, although numeracy is about numbers but not limited to numbers, it relates to the skills of using numbers to solve problems in everyday life (Campbell & Mandel, 1990). Children are expected to develop a basic knowledge of numbers, skills, shapes and measurement in early childhood (Ministry of Education, 2007). Early childhood teachers may plan specific learning experiences to facilitate Chinese children’s numeracy skills, such as reasoning, problem solving and measurement, in early childhood settings to bridge the learning gap between home and early childhood education settings.

Further research possibilities

In order to provide a detailed picture of Chinese immigrant children’s literacy and numeracy learning in early childhood within the New Zealand context, perspectives of children, parents and early childhood educators should all be taken into account. Therefore, further direction of research could be conducted as follows to provide a thorough understanding of Chinese children’s early learning.

- Parent-child interactions in story reading
- Early childhood teachers’ perception of Chinese children’s learning in early childhood
- Chinese children’s learning experiences in early childhood education settings.
- Chinese parents and early childhood teachers information exchange about literacy and numeracy learning

Conclusion

Family is a contentious space which encompasses a variety of social, cultural, economic and symbolic meanings that shift across socio-economic areas, gender, race and age (Siraj-Blatchford & Clarke, 2000). The child's learning environment extends far beyond individual home or early childhood settings. Children construct their learning through interaction with the immediate environment and the wider communities (Cairnery, 2002). Cultural values and practices play a fundamental role in a child's learning and development. Children who live in a particular community of practice will be offered particular types of activities and learning experiences (Melhuish et al., 2008). However, culture reflects collective behaviours and central orientations which differ from other social groups (Goodnow & Collins, 1990). Confucian-dominated ideology has been broadly examined and applied in deconstructions of Chinese immigrants' parenting styles and their children's learning (Chao, 2001). Chinese early childhood education is labelled as respecting authority, and children passively receive knowledge through structured formal teaching (Vaughan, 1993).

Nevertheless, Rogoff (2003) says that understanding the dynamics of cultural practices and communities where the child is embedded is essential to understand a child's development. She proposes that new understanding from a diverse cultural or linguistic community can add to mainstream values and beliefs. The beliefs and values represented in the participants' life experiences in this study indicate that Chinese parents are considerably involved in their children's education with different approaches to support their children's educational achievement from an early age. Chinese parents place a high value on education and view education as a route to success in society (Li, 2004; Chao, 1995). This is in line with the concept that education is viewed as a family affair by the Chinese (Hartley, 1995).

Te Whāriki (Ministry of Education, 1996) states that "there is a growing understanding of the links between culture, language and learning and increasing commitment to addressing the issues faced by children growing up in

a society with more than one cultural heritage” (p. 17). Early childhood educators are required to work with parents in partnership (Ministry of Education, 1996). Overall, Chinese immigrants in this study pay close attention to their children’s literacy and numeracy acquisition in early childhood. They believe that children develop their interests and skills in literacy and numeracy learning in a nurtured environment. They prepare a supportive environment and conduct a variety of educational activities at home to facilitate their children’s learning. These learning practices are constructed upon both traditional Chinese beliefs of education and Western child-centred pedagogy that they are exposed to in Aotearoa New Zealand. Five of the six participants demonstrated their understandings of the value of play for their children’s learning and development. They viewed play as a learning process and also a product in early childhood. It is not necessary for the “product” to be perfect. The process that the child is engaged in is valued more by the participants. Moreover, this group of parents also significantly value children’s socio-emotional development which is inherent in both Chinese cultural values of social integration and goals of nurturing the whole child in New Zealand early childhood education.

This group of Chinese parents has developed some traditional Chinese strategies to facilitate their children’s achievement and incorporate approaches, which take place in mainstream early childhood settings, into their practices with their children. Confucius (2010) proposes: “Tell me and I’ll forget. Show me and I’ll remember. Involve me and I’ll understand.” Learning occurs when the learner is actively involved. It is consistent with the well-accepted view that young children learn by doing, in New Zealand early education (Ministry of Education, 1996). Participants’ children are involved in literacy and numeracy learning through participating in daily events at home, and Chinese parents support their children’s learning through interactions and instructions. Te Whāriki (Ministry of Education, 1996, p. 82) states, “The attitudes and expectations that are formed at an early age will continue to influence a child’s learning throughout life.” Therefore, the learning strategies and styles that young Chinese children develop in the early years are fundamental in later learning and achievement, and these strategies and styles can be best understood in relation to their family lives.

Participants' views on children's early learning are closely associated with their beliefs of what children should learn and how they learn, based upon their historical cultural beliefs and personal experiences. They are clearly aware of what they are doing and why they are doing so in relation to their children's learning. As a Chinese mother and an early childhood educator, I feel deeply that Chinese parents value their children's education highly and they are working very hard to support their children's achievement from their children's early years. I believe the valuable experiences shared by participants can help me and other early childhood practitioners understand how they form their ideas and practices, which can in turn enhance Chinese children's cultural coherence and continuity of learning experiences from home to early childhood educational settings in Aotearoa New Zealand.

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Appendices

Appendix A: Invitation for participation (English)



Participants needed for research

I am looking for volunteers to participate in a study of

Literacy and numeracy in early childhood

Chinese immigrant parents' perception of children's learning

- This study aims to investigate Chinese immigrant parents' perception of their children's learning.
- This study will result in a thesis for a Master of Education (Early Childhood Education).
- As a participant in this study, you would be asked to attend an interview in person and it will take you 20 to 40 minutes.

If you are not clear about documentations of this research or have any questions through the process, I will explain or translate for you.

For more information about this study, or to be a volunteer for this study please contact:

Student researcher: Fengyi Yang

Anne@alper.co.nz

Supervisor of the research: Dr. Beverley Clark

Associate Head of School (Academic)

School of Education

Te Kura Matauranga AUT University

921999 ext 7936

Appendix B: Invitation for participation (Chinese)



诚征课题研究参与者

我真诚地邀请您自愿参与课题研究：

Literacy and numeracy in early childhood: Chinese immigrant parents' perception of children's learning.

中国家长对于孩子早期（学龄前）教育中识字和数的学习的认识。

- 这项研究的目的是调查中国移民家长对孩子早期（学龄前）学习的认识和观点。
- 这项研究的书面报告将会成为硕士（幼儿教育）论文。
- 作为这项研究的参与者，您将会被邀请参加一个 20—40 分钟的个人访谈。

如果您有兴趣参与这个课题研究，请联络我：杨风仪 Fengyi Yang

Anne@alper.co.nz,

在参与这个课题的过程中， 如果您对有关这个研究的文字资料不明确，或有任何问题， 我会为您解释或翻译。

或本课题研究的导师： Dr. Beverley Clark

Associate Head of School (Academic)

School of Education

Te Kura Matauranga AUT University

921999 ext 7936

Appendix C: Participant Information Sheet

Participant Information Sheet



Date Information Sheet Produced:

05-01-2010

Project Title

Literacy and numeracy in early childhood: Chinese immigrant parents' perception of children's learning.

An Invitation

I am Fengyi Yang, a student currently enrolled in a Master of Education programme at AUT and I would like to invite you be a voluntary participant in this research. You may withdraw from this research at any time prior to completion of data collection of this research without any adverse consequences.

What is the purpose of this research?

This research will result in a thesis for the degree of Master of Education. The purpose of the study is to investigate Chinese immigrant parent's perception of children's learning in terms of literacy (the ability to read and write and emergent literacy: the informal process that proceeds reading and writing) and numeracy (skills with numbers and basic mathematic knowledge) acquisition in early childhood. The findings of this study will be published in a thesis.

How was I chosen for this invitation?

You have been selected to take part in this research because you are a Chinese immigrant parent with children who are/were involved in New Zealand early childhood educational settings. I obtained your contact details since you have responded to my advertisement for recruiting participants in this research.

What will happen in this research?

I will contact you by phone or email and arrange a time and place for an interview. Interview will take you 20 to 40 minutes. The interview will be recorded. I will transcribe it into hard copy. You will receive the copy and review it with making any changes if you like to. I will read the information carefully, comparing with other participants' data, group them and then develop them into themes. I will send the data to you for checking.

What are the discomforts and risks?

Time and place of the interview will be discussed by both of us. You are most welcomed to freely talk about your experiences based on the interview questions. Participation in this study is completely voluntarily. .

How will these discomforts and risks be alleviated?

Your comments in the interview will be kept anonymous during the interview and also in the research report. Code will be used to identify each participant. Your identity will be kept confidential. The data and the Consent Form will be stored at a different location.

What are the benefits?

The benefits of participating in this research are that you will have an opportunity to share your experiences and expectations on children's literacy and numeracy acquisition in New Zealand. The findings of this research may enhance understandings and communications between early childhood teachers and parents, and may facilitate Chinese children's learning in relation to their literacy and numeracy learning in early childhood.

What are the costs of participating in this research?

Your time input in this research is around three and half hours, including travel to the interview place, interview, and review the data. There will be no financial cost to you in participation in this study.

What opportunity do I have to consider this invitation?

You have right to decide to be involved in the study or withdraw for any reason without any adverse consequences before completion of data collection. Please feel free to contact me about the research (see details below); you may also like to contact my project supervisor Dr Beverley Clark (see details below).

How do I agree to participate in this research?

If you would like to participate in this research, please e-mail me and I will mail you the Consent Form to sign. Then we can arrange a time and a place for our interview. I also could collect the Consent Form when we meet.

Will I receive feedback on the results of this research?

A summary of the final research report will be sent to you by mail or via e-mail.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor Dr Beverley Clark. Tel: 921999 ext 7936 or e-mail beverley.clark@aut.ac.nz

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTECH, Madeline Banda, madeline.banda@aut.ac.nz, 921 9999 ext 8044.

Whom do I contact for further information about this research?**Researcher Contact Details:**

Fengyi Yang. E-mail: anne@alper.co.nz

Project Supervisor Contact Details:

Dr Beverley Clark. Tel: 921999 ext 7936 or e-mail beverley.clark@aut.ac.nz

**Approved by the Auckland University of Technology Ethics Committee on
type the date final ethics approval was granted, AUTEK Reference number
10/15**

Appendix D: The Consent Form



CONSENT TO PARTICIPATION IN RESEARCH

Title of Project: Literacy and numeracy in early childhood: Chinese immigrant parents' perception of children's learning

Project Supervisor: Dr Beverley Clark – Associate Head of School of Education (Academic)

Researcher: Fengyi Yang

I have read and understood the information provided about this research project in the Information Sheet dated 08 January 2010

- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- ☐ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- ☐ If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- ☐ I agree to take part in this research.
- ☐ I wish to receive a copy of the report from the research (please tick one):

Yes ☐ No ☐

Participant's signature:

.....
.....

Participant's name:

.....
.....

Participant's Contact Details (if appropriate):

.....
.....
.....
.....

Date:

**Approved by the Auckland University of Technology Ethics Committee on
18 March 2010 AUTEK Reference number 10/15**

Appendix E: Indicative interview questions

Indicative Interview questions

(Note: You can answer questions either in English or Chinese).

1. What do you think about literacy and numeracy learning in early childhood? Why?
2. What are your expectations for your children's literacy and numeracy learning in early childhood?
3. What type of learning environment and resources do you provide for your children to learn literacy and numeracy at home?
4. How do your children develop literacy and numeracy at home?
5. How do you introduce literacy and numeracy at home?
6. Tell me about your children's literacy and numeracy learning at her/his preschool.
7. How do you think about those preschool learning experiences?
8. Did your child experience any Challenges in literacy and numeracy learning? Why?
9. What are your expectations of early childhood teachers to support your child's learning?