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TRANSFORMATION IN TEACHING PRACTICE OF CHINESE TEACHERS BLENDING WESTERN AND CHINESE EDUCATIONAL APPROACHES FOR ORPHAN CHILDREN IN CHINA: A MIXED METHODS STUDY

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TRANSFORMATION IN TEACHING PRACTICE OF CHINESE TEACHERS
BLENDING WESTERN AND CHINESE EDUCATIONAL APPROACHES FOR
ORPHAN CHILDREN IN CHINA: A MIXED METHODS STUDY

by

Wen Zhao

A DISSERTATION

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Lincoln, Nebraska

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TRANSFORMATION IN TEACHING PRACTICE OF CHINESE TEACHERS
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Wen Zhao, Ph.D

University of Nebraska, 2007

Adviser: Carolyn Pope Edwards

The goal of this study is to investigate how a group of twenty teachers who work in an intervention program for institutionalized children in the Guangzhou Children Welfare Institution adapt Western educational concepts and approaches to transform their Chinese teaching practice. The intervention curriculum integrates the Italian Reggio Emilia approach and the American approach to teacher education with the practice that underlies Chinese national guidelines for early childhood education. This mixed methods design uses both qualitative and quantitative data to explore the adaptation process in order to study how their teaching beliefs and perceptions of teaching and learning are transformed after one year working in the intervention program. This study also examines how the teacher preparation and professional development impact the adaptation and transformation process. The qualitative data involves pre- and post-measures of self-drawings of the teachers, interviews at the sixth month mark of working in the program, and field notes from different timeframes. The quantitative data includes pre- and post-measures of Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs. The findings indicate that all the teachers described changes in their communication skills, relationships with children and others, and confidence in themselves as well as their

reflection competence. However, the findings also reveal differences between teachers hired from inside the institution and those hired from outside the institution in terms of the levels of changes in Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs. Finally, the findings of this study suggest implications for developing an effective intervention program for children at high risk in an institutional setting. Children at high risk may benefit greatly both emotionally and cognitively from a relationship-based progressive intervention curriculum.

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Chapter 1

INTRODUCTION

Statement of the problem

The need for Chinese education reform. Since the Chinese government implemented its Open-Door policy three decades ago, China has attracted Western investment and technology development. Economic reform has succeeded in not only stimulating widespread economic improvements in China (Mcloughlin et al., 1997), but also more importantly, affecting social, political and educational arenas, and inspiring reform of Chinese education in general, including early childhood education, which is an integral part of the total Chinese education model (Mcloughlin et al, 1997).

As China develops a toward becoming a more open society, Chinese education reform has been demanded by the public and the Chinese government, according to a release from the Ministry of Education of China Government in January 6, 2004. In the release, the Ministry promises that

in the future, the educational work in China will follow the principle of consolidating existing achievements, deepening reform, improving quality and pursuing sustainable development to promote the overall, healthy, rapid and sustainable development of education of various forms and at all levels. (p.1) This sentiment of education reform has been echoed by the public, which has called for an enhanced education system that strives for a better future for the young generations, who

are living in a challenging world; it is now a common conception that a successful human being should be psychologically, intellectually, and physically well-prepared, and should also be capable of being a collaborative, innovative, life-long learner, ideas that derive from Western views on education (Cochran-Smith, 2004). Apparently, the Chinese Open-Door policy has also brought the influence of Western educational concepts in child development and teaching practice to the reform of Chinese education (Hsueh, Tobin & Karasawa, 2004).

Issues in Chinese education reform. Assimilating foreign worldviews is not new to Chinese educators, but the traditional Chinese value still remains strong. Indeed Chinese education has been influenced by Western societies since the early twentieth century. The progressive approach to pedagogy was introduced in China during the early twentieth century by Chinese scholars who were heavily influenced by John Dewey. These scholars had studied in the United States (Niu, 1994). However, the traditional characteristics of Chinese education, which stress collectivism and the hierarchical authority of teachers, have remained strong. Due to this historical context, there has been a big gap in China between understanding progressive education intellectually and implementing its principles in practice. This problem has become especially pronounced during the last two decades as Chinese teachers have become more aware of the many reforms needed in order to help the younger generation succeed in a fast-paced society and new complex world.

Chinese educators and the public know intellectually that Western education systems seek to promote individual autonomy and innovation; they attribute Chinese children's limited competence in independent and innovative thinking to shortcomings of traditional education (Vaughan, 1993). Chinese educators and the public are raising their concerns with the Chinese education for the next generation and demanding education reform that adapts Western ideas to Chinese education in the current historical era (Tao, 2006). Education is viewed as integral for a nation's development; thus the Chinese government has repeatedly called for education reform in the past two decades. It has often been claimed that the nation's goal of modernization rests heavily on education and its reform, and the improvement of the country's education depends on teachers and teaching methods (Zhang & Collis, 1995). Teacher preparation, therefore, has become an urgent reform topic in China.

However, cultural traditions and traditional beliefs in education are resistant to change, and people must always be careful when incorporating new ideas to not lose the strength of traditional methods (Zhao, Edwards, Youngquist, & Xiong, 2003). The incorporation of Western educational ideas into Chinese teaching methods is a cultural as well as a political challenge. Chinese educators encounter many obstacles on the way to educational reform; teacher preparation, therefore, becomes one of the most difficult challenges in preparing new as well as veteran teachers to adapt new ideas from the West into their Chinese teaching practice.

Issues in Chinese teacher preparation in early childhood education. Traditional teacher preparation and training in China emphasizes giving new teachers a strong set of conventional skills while paying little attention to later teacher professional development, which focuses on teacher's on-going growth in their professional and pedagogical orientation. In contrast, the latter orientation to on-going growth toward teacher preparation can be found in the Reggio Emilia approach from Italy and the progressive approach of the United States, where teacher preparation and training move away from focusing on simply classroom survival skills; instead they focus on continued teacher learning, collaboration, and reflective practice as well as teachers' self efficacy, changes in attitudes toward pedagogy, shifts in knowledge and beliefs, and the ability to reflect (Cochran-Smith, 2005). This orientation to teacher preparation encourages teachers to co-construct knowledge with children (Moran, 1998). Both the Reggio Emilia and progressive approaches emphasize children's initiative in learning and the importance of interactions as a stimulus to development. The core of progressive pedagogy comes from John Dewey's pragmatic tradition that focuses on human development, interaction with the world of people and materials, building democratic community, and humanist values (Nagor & Shapiro, 2000). In progressive schools, children become more competent in working collaboratively and more innovative in their symbolic expressions; children become confident in their own learning and active participants in their learning environment. These are the goals that contemporary Chinese society has for its students. Parents, especially those with highly-educated, and educational scholars in Chinese

society, expect teachers in China to move away from traditional beliefs and to become reflective, innovative, and researching practitioners (Zhang & Li, 2006). Therefore, integrating Western pedagogical philosophies into the Chinese educational system is now possible given the context of contemporary Chinese society.

In China, teacher preparation follows traditional models of education, and yet it is beginning to change, trying to bring concepts of child development and teaching practice from Western society to answer the needs for reform, especially in big cities such as Beijing and Shanghai (Hulbert, 2007). Early childhood teacher preparation typically includes three years of secondary education in a kindergarten teacher training school, where the curriculum focuses on the discrete teaching skills. For example, the teachers in training learn to plan and teach group lessons to instill skills in children (McMullen et al., 2005). Singing, dancing, and drawings are required skills for pre-service teachers during their training years (Hsueh & Tobin, 2003). Recently, more college-level training programs have been offered where child development theories and Western ideas are introduced (McMullen, et al., 2005).

Educational changes are occurring with a great deal of attention to curriculum and practice nowadays in China (Hsueh & Tobin, 2003). However, the psychological well-being of Chinese teachers in this fast-changing society has not yet received much attention, a situation which more likely leads to increased resistance to change (Argyris, 1993). Toffler (1970) conducted a study on the acceleration of change and its psychological effects; Toffler's study suggested that acceleration of change leads to a set

of severe physical and mental disturbances. When changes take place, people are usually pushed to adapt to the changes. This pushing may lead to different levels of resistance against the changes (Argyris, 1993). The high level of anxiety and uncertainty about change is associated with the traditional high value placed on power and authority. Unlike many Western societies, Chinese society is structured around hierarchical relationships based on power and authority (Ho, 1986).

On the other hand, the energizing ideas of democracy are shaking traditional values of hierarchal power and older social structures. In their study on resistance to change, Maurer and his associates (1996) found that in 95 percent of successful changes the stakeholders saw a compelling need for them; that is, they understood why something new was needed. But in the context of education reform, Chinese teachers may understand the need for change in teaching and learning, yet making these changes is complex and difficult (Hsueh & Tobin, 2003). Chinese teachers often find it difficult to give up the preference for hierarchy in the teacher-child relationship. This traditional relationship symbolically represents the power and authority that reflects the Chinese worldview about learning and teaching, which is more adult-centered. It is common for Chinese teachers to believe their work is likely to become harder as their teaching practice changes to an approach where children are allowed to have more freedom in decision-making, and teachers are expected to promote initiative, individual attention, and creativity of children (Zhen, 1986). The conflict between traditional values and the urgency of social changes compounded by the lack of understanding about the

psychological effects of these changes on Chinese teachers complicates the transformation process for education reform in Chinese society.

Questions and the statement of the problem for this study. The complex issues related to Chinese teacher education have left Chinese professionals in early childhood education wondering: How well are we able to incorporate Western ideas into Chinese education? How can Chinese teaching methods still be valued when compared to Western pedagogy? What benefits can we receive for ourselves as educators and for Chinese children in adapting Western approaches to the Chinese teaching model?

This research is to study this general problem within a specific context: a group of teachers newly trained to work at Half the Sky Foundation (HTS) intervention program for institutionalized orphaned children in China. The intervention curriculum combines Western philosophical and pedagogical approaches with a Chinese context in order to provide early childhood educational services for children in a deprived environment. In addition to being vulnerable to the behavioral and emotional problems of being marginalized, these children are educationally disadvantaged, unaware of their own value as human beings, and generally unprepared for adult life (Edwards, Cotton & Zhao, 2007). This research focuses on educational change in early childhood education practices for teachers working in Half the Sky intervention programs in China serving these disadvantaged children. Chinese teachers in Half the Sky intervention programs face special difficulties in addition to the general problems of adapting Western approaches to a Chinese teaching context. These special challenges are due to the fact

that the children with whom they work have special needs in all developmental areas, because of the institutional context. It is well documented that institutionalized children tend to have developmental delays and attachment disorders compared to their peers growing up in families (e.g., Minde, 2003; MacLean, 2003; Miller & Hendrie, 2000). However, HTS seeks to address the challenges posed by teaching institutionalized children by providing a strong support system for teachers through an initial training institute and on-the-job professional development services. This support system may shed some light on explaining the teachers' adaptation processes to a combined Western and Chinese teaching practice. This study seeks to answer the question: what happens when Chinese teachers work with institutionalized children using a Western approach combined with traditional teaching practices in China?

The Half the Sky Foundation of the United States provides preschool intervention programs that combine Reggio Emilia and progressive approaches with Chinese teaching practices for institutionalized children in China. Training Chinese teachers to adapt Western pedagogical approaches to the Chinese cultural context is a natural experiment for studying the phenomenon of adaptation to a Western worldview in a Chinese educational context. This study focuses the transformation processes of HTS teachers trying to combine Western and Chinese teaching approaches when working with the institutionalized children in China. The following questions were explored: How do HTS teachers react to the need to make changes in their teaching practices? How can these new teachers respond to the challenges of education reform when they start their careers

working for HTS? How will they successfully shift from relying on traditional approaches to a more reflective-oriented practice? What do their experiences suggest about how and in what circumstances Chinese teachers can adapt to a new era of education in China? The results of this study may help education researchers and practitioners to better understand the transformation of Chinese education that will ultimately benefit Chinese children to the greatest extent possible. This research will provide insight into the change process in Chinese teachers as they adapt to the Western educational worldview.

Background to the problem

Teaching and learning in the traditional Chinese perspective. The traditional basis of Chinese social organization is the extended family, with a hierarchy based on generation and gender. The social relationships are centered on authority, power and age. In Chinese society, social roles are clearly defined within families and communities; these roles are believed necessary to maintain social order and harmony and to deter conflict and chaos. Obedience is socialized throughout the life-span as an indication of being respectful of authority and power in order to maintain social harmony and prevent conflict and chaos (Chao, 1994; Cheah & Rubin, 2003).

Teacher-child relationships, therefore, fall into the hierarchical realm in which teachers perceive themselves as having power and authority over children. Chinese teachers are neither trained nor culturally socialized to learn from children or to

collaborate with peers. Teachers are trained to believe that the role of a teacher is to "deposit" knowledge into the child in order to meet the child's needs for knowledge (Zhang & Collis, 2005). In the traditional Chinese worldview, children are dependent on adults to gain knowledge and mostly incapable of learning about the world without adults' strong guidance and advice. This view derives from Confucius's ideology that the student should follow the expert master-educator, learning through imitation and emulation by rote and practice (Hughes & Yuan, 2005). A typical Chinese classroom emphasizes order, structured lessons in a large group, and the teacher's authority (Vaughan, 1993). During the preschool years, impulse control is stressed as it is widely regarded to be a precursor to academic achievement (Ho, 1986). Children are expected to be well-controlled and well-behaved in an environment with high teacher-child ratios and large group sizes (Rao et al. 2003).

Today Chinese educators are reforming the curriculum of kindergarten to support creativity and individuality in order to make it more responsive to the needs of the children and the evolving culture (Zhu, 2003). Chinese teachers are being exposed to Western views and at the same time are being rushed to achieve new curriculum standards in a context of rapid social change. A major confusion for Chinese teachers is how to define the role of teachers in contemporary Chinese education reform, because the new values challenge the function of traditional Chinese teaching as well as the traditional role of the teacher (Zhang & Li, 2006). Education and curriculum reform attempt to transform Chinese education by developing individual creativity and focusing

on reflective thinking in teachers and children (Hughes & Yuan, 2005). Therefore, the need to transform ideas and practices of teaching and learning by shifting from teacher-centered to child-centered learning is increasingly felt by Chinese educational scholars and reformers (Hughes & Yuan, 2005).

Teaching and learning in progressive Western perspectives. The concept of teaching as learning is focused on teachers' thinking and knowledge (Grossman, 2005). This conceptualization comes from American educational philosopher, John Dewey, who argued that teachers become reflective through deliberating on their actions with openmindedness, wholeheartedness, and intellectual responsibility (Cruickshank, 1987). Dewey (1933) saw teacher reflection as "always with the goal of directing actions with foresight according to ends in view or purposes of which are aware...Reflection enables us to know what we are about when we act" (p. 17). The teacher's role, then, is to support students to help them learn how to explore better rather to judge how well a student has performed (Applebee, 1996). In the absence of reflection in the Western progressive worldview, teaching becomes impulsive and authoritarian (Cruickshank, 1987).

There is another dimension to viewing teaching as learning. Being tolerant in ambiguous situations allows teachers to be more flexible and more open to acting proactively. A high level of tolerance for ambiguity requires a complex and reflective teaching practice that is able to manage with more uncertainty in teaching situations. Tolerance of ambiguity is related to independence in decision-making, risk-taking, growth of knowledge, and creative production (Gallagher, 1994). Being tolerant of

ambiguity also provides the learning context for teachers as they search for meaningful ways to identify the best learning possible in classroom (Grant, 2001). Whether teachers are able to recognize and accept ambiguity will depend on her/his worldview of teaching and learning and will affect the learning outcomes of children.

Reggio Emilia approach in Italy. Half the Sky's intervention program adapts the Reggio Emilia approach from Italy and the progressive pedagogy of the United States to Chinese teaching practices. The Reggio Emilia approach centers on teacher-child relationships, with the emphasis on children's constructivist learning through collaboration using a variety of expressive media such as art and body movement (Edwards, Gandini & Forman, 1998). The Reggio Emilia system, as Gardner (1998) describes, is a collection of schools for young children in which each child's intellectual, emotional, social, and moral potentials are carefully cultivated and guided (p. xvi). Reggio Emilia educators believe in the competence of young children, i.e., that they are capable of constructing their knowledge in an educational and caring environment created by the teachers. Through project-related activities, children get constant individual attention from adults for support, encouragement, and guidance (Edwards, Gandini & Forman, 1998).

One strategy of the Reggio Emilia approach is using documentation to demonstrate the learning process. The teachers use documentation to assess the children and also as planning platforms and emotional support tools for the children.

Documentation assists in scaffolding learning and development.

Both the Reggio Emilia approach and American progressive pedagogy stress the teacher as a reflective practitioner who works hard to better understand her/his students (Moran, 1998). Collaboration is a driving force for negotiated learning among teachers, who are both learners and teachers (Forman & Fyfe, 1998). The image of the teacher is as a learner, researcher, and collaborator (Bredekamp, 1993). This image means that teachers perceive themselves not as expert dispensers of knowledge, but as lifelong learners who construct knowledge not only within their teams but also alongside the children with whom they work (Moran, 1998).

Half the Sky intervention program. Half the Sky Foundation provides an educational intervention program that integrates Western educational philosophy and developmental theories with Chinese culture in order to meet the educational needs of institutionalized preschool age children in China. This innovative curriculum provides individual attention for each child and promotes creativity and collaboration in a nurturing, relationship-based learning environment. Describing a Half the Sky intervention program, Paul Mooney, a reporter from the *South China Morning, Hong Kong*, wrote (December 13, 2003):

A visit to a Half the Sky pre-school classroom shows an environment that differs sharply from traditional Chinese classrooms, where the teacher is a symbol of unquestioned authority. In a pre-school classroom at the Hefei Children Social Welfare Institute, teachers sit on stools at eye-level with the children as they work with different piles of dried leaves, clay and colorful scraps of paper and cloth.

The structure is flexible and encourages each child to be creative. The vice director Sun Ka of Hefei Children Social Welfare Institute, where Half the Sky program has been successfully operated for more than five years, describes how one of the children graduated from the program and became an elementary student in the neighborhood school pointing out that the teacher had incorrectly written a Chinese character on the blackboard. “Chinese children never rebut or criticize a teacher,” says Sun, barely concealing her delight in the confidence of her young girls. “Our children feel equal with the teachers, and this is extremely helpful to their development. They won’t be afraid of the teacher or to speak out.” Sun describes how the teachers at the local school, who once had little regard for the children from the orphanage, have changed their views. Your children are completely different from the past,” she quotes one teacher as saying. “They’re really wonderful.”

The above article describes how HTS’s Western-inspired programs encourage students to become active learners who are competent and confident in their learning.

Purpose of the study

After a one-month teacher preparation training, a group of twenty teachers began to work immediately in Half the Sky’s educational program at the Guangzhou Social Welfare Institution in China. This study followed this group of teachers for the first twelve months to investigate the changes that occurred in their teaching practices as well

as how they addressed cultural and pedagogical conflicts when putting their training into practice in the first year.

This study examined the following questions: How does teacher training affect the management of conflicts experienced by teachers? And what impact has this combined Western-Chinese practice had on the Chinese teachers in terms of their professional development and beyond?

The research hypotheses

The experience of adaptation to Western educational approach is a complex, multilayered, and contextual learning process that involves emotional, cognitive, and cultural adjustments for Chinese teachers. Examining the learning experience in the process of adaptation of Western concepts to the Chinese context can proffer a better and broader understanding about adult learning in cross-cultural perspective that may help develop a conceptual framework for thinking about teacher education with a global lens. Neither the quantitative nor the qualitative approach is sufficient to address the complexity of these research questions; therefore, a mixed methods research design is used to harness the strengths of both kinds of analysis to explain and interpret the data (Creswell & Clark, 2007). Qualitative data include teachers' drawings, individual interviews, and field notes to interpret the experiences of adaptation to, and the development of, the new approach to teaching in a sample of twenty teachers. Quantitative data were collected using self-report instruments to measure teacher

efficacy, tolerance of ambiguity, and constructivist beliefs in the same sample of twenty teachers for the period of a year of working in the Half the Sky intervention program.

This mixed methods study explores the following qualitative and quantitative research questions: 1) How do Chinese teachers describe their teaching practices while they work in a combined Western-Chinese educational program for the first year of teaching? 2) How are Chinese teachers able to demonstrate and report their adaptation to a Western paradigm of teaching and learning? 3) Do they discuss their experiences of change to both their professional growth and personal lives?

The hypothesis for the qualitative analysis was that the descriptions from this group of teachers would include changes relating to both their professional and personal growth. Teachers were expected to move toward a more open communication style and a new image of teacher-child relationship.

The hypotheses for quantitative analysis include the following: 1) There would be a change in teacher efficacy reported by the teachers from pre-test to post-test; 2) Tolerance for ambiguity would increase from pre-test to post-test; 3) Constructivist beliefs would increase from the pre-test to post-test; 4) The teachers hired from inside the institution would have more difficulties than teachers hired from outside when adapting the HTS program teaching practice.

The significance of this study

Many people, especially teacher educators, researchers, practitioners and administrators from both Western and Chinese cultures, have been drawn by their curiosity and interest to the adaptation of Western worldviews into Chinese contexts: many wonder, how are Western ideas received by Chinese teachers? There may never be definitive answers to these questions because of the enormously complex, wide-ranging, highly ambiguous, and profoundly personal social mores that are deeply rooted in cultural socialization, political beliefs, and the subjective nature of the outcomes in teaching and learning (Barone, 2001). The complexity of teaching and learning increases when teaching and learning are put into a context of cross-cultural practices. Yet, there has been scant research conducted to examine the cultural and worldview changes teachers experience when adapting a foreign educational approach. This study will make a great contribution to the understanding and practice of cross-cultural teacher preparation and development by making connections about the diversity of children's learning needs.

This study will provide a formative discourse for international educators by paying close attention to what may happen in teaching and learning when teachers encounter a new approach or a new method that is foreign to them. How can teachers be better prepared and equipped for the rapid changes that are associated with their professional development both in China and in a global setting? By paying close attention to the phenomenon of cross-cultural teacher education, I hope this study can

benefit future cross-cultural studies in the teacher preparation field, which is becoming more and more important as the world becomes a global village. The intention of this study is also to promote further dialogue among professionals in China and around the world about the professional well-being of teachers working during times of rapid social changes.

This study may also provide some valuable information on curriculum development and teacher preparation for those who work with high-risk children. The findings of this study may help teachers with strategies in curriculum implementation that are developmentally appropriate and emotionally responsive to meet the unique needs of these children in order to help them achieve their potential and ensure a promising future.

Chapter 2

LITERATURE REVIEW

Comparison of educational philosophies between the West and China

John Dewey's philosophy on education. American educational philosopher John Dewey has had worldwide influence on the philosophy of education. He strongly advocated democracy in education and put forward conceptualizations about educational philosophy. He gave education a new meaning that not only has had a century's impact on the worldview of the education, but has also changed the quality of people's lives in education. Dewey (1966) viewed education as a process of living and not as preparation for future living. In other words, for Dewey, education is life. Learning in school can be a process of living; school is transformed into a community environment where children, teachers, and parents live and where a close-knit community can be achieved. This educational community offers a continuity of education between school and home, so that the child experiences continuity and can learn to become a useful member of a larger social group.

Dewey (1899) also viewed education as growth since growth is a characteristic of life in which one develops from immaturity to maturity, similar to the process of education; they are both processes of continual reorganizing, reconstructing, and transforming. Education, like growth, has no end beyond itself and is continuous; yet it also leads individuals into the future by making them better suited for later challenges.

When a child is given opportunities in a consistent environment linked to both home and school, continuous learning experiences are provided in terms of activities and materials. The school experience, thus, can be adequately utilized at each developmental level so that the student will enter her future with confidence and readiness. In Dewey's theoretical analysis of the growth of intelligence (1966), he considered the growth of intelligence as a guide to education. He proposed that coordinating students' sensory-stimuli and muscular-responses leads to the connection between ideas and actions. Ideas are the understanding of actions, and intelligent action is the result of mental growth. Intelligent growth is the process of the total activity among thought, feelings, and actions. Therefore, education should respect the nature of growth and guide children toward desired actions while respecting their thoughts and emotional feelings that meet the common goals of the community.

John Dewey's philosophy about learners. To further define education as democracy, Dewey argued that education was essential for the survival of a democratic society in which all individuals are able to participate freely and equally; a democratic society should be adamantly committed to providing the best education not just for some, but for all of its children. Similarly, in Dewey's view, a teacher should be "free from prejudice, partisanship, and such other habits as close the mind and make it unwilling to consider new problems and to entertain new ideas" (p.17). In other words, teachers should be committed to democratic and inclusive ideals.

Confucius's philosophy on education in China. In China, there is no philosophy that has been as enduring and influential as Confucianism (Kim & Choi, 1994).

According to Confucius, the process of education entails acquiring knowledge and putting that acquired knowledge into practice; further, in Confucian philosophy, one can always deduce the unknown from what is already known (Tweed & Lehman, 2007).

Confucianism emphasizes formal rituals that are a reflection of the hierarchical relationship doctrine in every aspect of life; the hierarchical relationship requires authority, responsibility, and wisdom from superordinates and requires loyalty, obedience, and dedication from subordinates (Kim & Choi, 1994). Confucius expected learners to respect and obey authority figures. He developed five ethical relations and taught people to obey and respect those with higher statuses than themselves; these five ethical relations are the universal obligations of duty between ruler and subject, father and son, husband and wife, elder and younger, and between friends (Tweed & Lehman, 2007). The teacher-child relationship is characterized as hierarchical, and therefore each of these two social positions has an obligation to obey their duties.

Confucius' philosophy of learners in China. Confucius's major influence on Chinese educational philosophy is the relationship between learning and teaching (Feng, 2000). The purpose of teaching is to pass knowledge on to the students, which is characterized as passive learning (Barker et al, 1991). Confucianism values a more absorption-focused approach as central to the conception of learning (Tweed & Lehman, 2007). Thus, Confucianism views learning as passive; students receive information

whereas Western progressive views of learning involve the student's active search for answers. Over several generations, Confucian philosophical principles have informed the distinctive character of Chinese education and mode of organizing the process of teaching-learning (Serpell & Hatano, 1997); these Confucian principles form the bedrock of pedagogical practices in China.

Comparison of cultural beliefs in education between the West and China

Culture is embedded in education in every society. Children are socialized with a set of cultural orientations and goals in order to survive. This process is known as enculturation, and it creates a context for cultural models of teaching and learning (Serpell & Hatano, 1997). Serpell and Hatano's theoretical work on cultural models and beliefs about teaching and learning concludes that while explicit formal theories consisting of verbalizable principles may make a contribution, the majority of the content of popular cultural models tends to remain implicit (p. 351).

Hofstede (1980) conducted an international survey of 117,000 people in 50 different countries and found four cultural dimensions: power distance, individualism, masculinity, and uncertainty avoidance. The finding on the individualism and collectivism dimension revealed that the country with the highest rating of individualism was the United States followed by Australia, Great Britain, Canada, the Netherlands, and New Zealand. On the other hand, Venezuela, Colombia, Pakistan, Peru, Thailand, Hong Kong, Taiwan, and Korea scored the lowest on the individualism scale. Hui and Triandis

(1986) found similar results and concluded that collectivistic cultures are more likely than individualistic cultures to emphasize the implication of their behaviors on others (the social self), whereas individualistic cultures tend to enjoy their autonomy and take personal responsibility for their own successes and failures that they feel are independent from their membership in particular groups. These findings have implications in educational practices cross-culturally. Cross-cultural studies on education help international educators to raise their awareness of cultural differences in order to better provide teaching practices that are more sensitive and appropriate to their own cultures. For example, McMullen and her associates (2005) did a cross-cultural study of the United States, China, Taiwan, Korea, and Turkey to compare beliefs about developmentally appropriate practices (DAP) among early childhood education professionals in those cultures. They found Chinese teachers were significantly different from all other countries, especially the United States, in their beliefs about DAP and the frequency of engaging DAP practices. They also found that China, Taiwan, and Korea are also significantly different from other countries, especially the United States, because their societies reinforce a preference for a large teacher-child ratio and appropriate performance and behaviors from children. The authors suggest that these differences in philosophies and beliefs may be grounded in the values of collectivistic cultures that encourage social behaviors and socialization in groups.

Comparison of pedagogical premises of learning and teaching between the West and China

Pedagogical perception of learning and teaching from the West. How people view learning affects how people shape their views of education. In their conceptualized work of cross-cultural research, Serpell and Hatano (1997) studied the philosophical preoccupations and patterns of pedagogical practice of Western culture and Chinese-Japanese traditions in education. They claimed that while the central themes of Western culture in education are individual self-expression, cognitive detachment, and technical expertise, the central themes of the Chinese-Japanese traditions in education are moral perfectibility and emulation (p. 353). The findings of this research demonstrate the differing roles of teaching and learning between the Western and Chinese-Japanese cultures.

According to Knowles, Holton, and Swanson (1998), in the Western educational tradition, learning is viewed as an individualized process in which the following are seen: the learner takes responsibility for her/his own learning; learners are cooperative, collaborative, and supportive; learners are accountable for their new learning; and classes are student-centered. Stigler & Perry (1990) studied mathematics classes in Japanese, Chinese, and American classrooms and revealed the pervasive effects of cultural beliefs and attitudes that have an impact on children's learning through the organization and functioning of the classroom. They found that Chinese and Japanese students spent most of their time working on teacher-led activities with the whole class, while American

students spent more time working independently; contact with the teacher was more likely to take the form of individualized or small-group instruction. They concluded that this difference in the individualization of teaching is tied to cultural beliefs about the nature of individual differences and the nature of learning. Americans tend to think individual children are inherently unique in their limitations, and therefore, they emphasize individualized learning. The Chinese and Japanese believe in uniform learning and that all children can take advantage of the group learning experience.

Progressive pedagogy. Progressive pedagogy comes from a Western view of teaching and learning that focuses on human development, interaction with the world of people and materials, building democratic community, and humanist values (Nager and Shapiro, 2000). This conceptualization comes directly from Dewey's notion that teachers can be reflective by deliberating on their actions with open-mindedness, wholeheartedness, and intellectual responsibility (Cruickshank, 1987).

Teacher preparation and development in the West. Teacher preparation and development have been key topics when discussing education reform in Western society (Cochran-Smith & Zeichner, 2005). Cochran-Smith (2004) states: the "current approach to teacher education was more constructivist than transmission-oriented—the recognition that both prospective and experienced teachers (like all learners) brought prior knowledge and experiences to all new learning situations" (p.11). Teaching as learning is a concept that underlies the meaning of teaching in constructivism. In constructivism, teaching is viewed as an agent of learning, and there is a joint constructing of how to learn and how

to teach between learners and teachers. The interactions between learning to teach and teaching to learn are characterized as teacher inquiry that is complex, paradoxical, and tensile (Dana & Yendole-Silva, 2003). According to Dana and Yendole-Silva (2005), teacher inquiry is for professionals who seek out change by reflecting on their practices and by questioning and evaluating the efficacy of their own practices. Through inquiry they gain insights into their questions and develop new understandings. Loris Malaguuzi (1998), the founder of the Reggio Emilia approach, views this kind of learning as the key factor on which a new way of teaching should be based; learning features multi-level learners in the learning community who become complementary resources for teachers and students, offering multiple perspectives and options, suggestive ideas, and sources of support. In an active, reciprocal exchange, teaching can strengthen learning (Malaguuzi, 1998). This view of teaching as learning creates a new image of learning and teaching between teachers and students. Therefore, teaching as learning has made both teaching and learning interchangeable and results in reflective practices in education where everyone can learn and grow without limits (hooks, 1994).

In the study done by Project Zero at the Harvard University Graduate School of Education, “Making Teaching Visible-Documenting Individual and Group Learning as Professional Development” (Seidel & Gardner, 2003), researchers documented teachers’ professional development using various forms of documenting strategies. The goal was to reach a deep understanding of how both teaching and learning occur and how they influence outcomes for children as well as for adults. Their research identified the

experiences teachers had when they became active learners. They found that teachers identify their own questions, gather their own evidence, and actively engage in helping one another in answering their questions. The study of children's learning moves to the forefront for these teachers.

Reflection becomes essential in this kind of professional development. From the point of view of this research, professional development should be much more than training and acquisition of new knowledge and skills. Professional development should involve teachers coming to deeper understandings of teaching and learning; reflective practice should be part and parcel of professional practice. Educators should also focus on making learning processes visible in order to better understand how learners construct knowledge and how educators can most effectively influence that process. In so doing, teachers help children reach deeper understandings while simultaneously coming to understand teaching and learning better themselves. As teachers document and reflect on individual and group learning, professional development becomes part of the daily life of schools. The dual focus of the teachers' attention is on teaching and learning (p.10-11).

Pedagogical perception of learning and teaching in China. The Chinese belief in group learning is similar to Serpell and Hatano's (1997) assertion that emulation is one of the key aspects of educational practices in China. This feature comes from the Confucian heritage that dictates the use of "models" in teaching practices. Both Munro (1975) and Paine (1990) described this practice as the transmission of knowledge from teacher to student through modeling, with the teacher serving as the role model. Learning is viewed

as a masterful performance in which the student becomes like her teacher and is grounded in Confucian norms of orthodoxy.

Chinese pedagogy is heavily influenced by Confucian tradition and the socialist ideology of the last fifty years (Hsueh & Tobin, 2003; Hulbert, 2007). It is a common belief in China that learning should happen in a large group setting and everyone should make a deep commitment to learning and make painstaking efforts to do so (Gu, 2002). Students are expected to respect and not challenge their teachers. The reverence with which a teacher is held is reflected in many popular Chinese sayings, for example: “Being a teacher for only one day entitles one to lifelong respect from the student like the respect accorded to the student’s father” (*yiri weishi zhongshen weifu*) (Gu, 2002). In order to maintain this respect, order and obedience from students in large groups is highly valued and implemented (Zhao, Edwards, Youngquist, & Xiong, 2005).

The traditional Chinese model of teaching is characterized by the transmission of knowledge principally through an imitative and repetitive process (Paine, 1992; Tang & Absalom, 1998). Teaching methods are largely expository, and the teaching process is teacher-centered. The teacher selects points of knowledge from authoritative sources (usually textbooks and classics); interprets, analyzes and elaborates on these points for the students; helps them connect the new points of knowledge with old knowledge; and delivers a carefully sequenced dose of knowledge for the students to memorize, repeat, and understand (Tang & Absalom, 1998). The immediate importance and potential application of the knowledge is taught (Gu, 2006). Chinese teaching sees learning as a

linear movement from teachers to students.

Socialization of self and its relation to teaching and learning. Characteristics of learning and teaching in the Chinese context can be explained by the Chinese cultural perspective of self. Triandis (1989) suggests that childrearing practices in China tend to emphasize conformity, obedience, and reliability as well as the importance of the collective over the individual. As a result, the collective aspects of the self become more complex in terms of social relationships within society (Pratt, 1991); in collective cultures the self is constructed out of the person's roles and external expectations (Stone, 1962). In China, conceptions of teachers and the relationship between teacher and learner are quite different from conceptions in the West. The most prevalent conceptions of teaching depict teachers as transmitters of knowledge, role models, and centerpieces of the educational process (Pratt, 1991). Teachers are assumed to be expert in a content area in terms of the experience in knowledge and skills to be taught. There is also a clear boundary between the role of a teacher and a learner. A learner is expected to master the content through diligence and patience without questioning or challenging what is presented (Ho, 1986; Hsu, 1985; Pratt, 1991). Effective teaching as well as effective learning is measured by the student's performance on external examinations; few concerns are expressed about individual differences among students or student motivation (Pratt, 1991). Therefore, Chinese educational theories and practice are not concerned about individual differences, but rather with transforming people's personalities toward unified forms of thinking, believing, and feeling that are deemed best for society (Pratt,

1991). For example, large group teaching in Chinese early childhood classrooms exercise this cultural belief about self-development as unified across students (Vaughan, 1993).

Reform of Chinese education and teacher preparation

Since the “Open-Door Policy” was enacted, China has been questioning its traditional education system and has been engaging in educational reform. Teacher preparation education, therefore, has also been affected by reform (Hsueh & Tobin, 2003). For instance, the role of teachers is changing from one who is an authority over knowledge to one in which the teacher is a lifelong learner.

Chinese educators and prominent government officials have growing concerns that Chinese students, on the one hand, have become stressed out, test-acing drones, and on the other hand, are failing to acquire skills in creativity, flexibility, initiative, and leadership that are widely believed in China as necessary for survival in a global marketplace. Therefore, efforts in education reform have been stressed since 1985 by the Chinese government. The government has also made the decision to loosen its administrative and financial control (Hulbert, 2007). The emphasis on child-centered learning and cultivating creativity are beginning to be put into practice in schools, especially in areas where economic development has been growing over the last twenty years, such as in the areas of Beijing and Shanghai.

However, the curriculum shift has created an urgent need for teacher professional development. It also has revealed the lack of effort that had been put forth in explaining

the shift to parents who push academic competitiveness onto their children when they are still very young. Therefore, there has been resistance to less hierarchically-oriented and student-centered educational practices (Hulbert, 2007).

Huseh and Tobin (2003) conducted a study in China to examine changing beliefs about early childhood education as a follow-up study to “Preschool in Three Cultures,” a study in Chinese, Japanese, and American preschools conducted in the mid-1980s. In the current study, the authors invited early childhood educators in China to discuss a 20-minute video of a typical day in a Beijing preschool. Researchers noticed a consistent emphasis by the teachers interviewed on the needs of creativity, respecting children, nurturing individuality, freedom, and equality in preschool education in contrast to what they found twenty years ago. However, the authors heard concerns from the Chinese educational experts that although changes had taken place in the field, the emphasis on control, regimentation, and group activities described as dominant themes of Chinese preschools in the original “Preschool in Three Cultures” study remains pervasive today. The authors noticed that early childhood teacher education still remained in the traditional curricular mode. Hsueh and Tobin (2003) suggest from the findings that there is, at least in China’s urban settings, a new normative view and that the goals and strategies of early childhood education have merged since the first study in 1985. However, the tension caused by rapid and uneven economic and societal changes coupled with concerns that core cultural beliefs are being lost creates an uneven and unstable understanding of how best to care for and educate young children in China. The study

concludes that it takes many years for new ideas to show up in teacher education curriculum. This finding is consistent with literature that states that changes in teacher education curriculum take time before they have a demonstrable impact on teaching practice (Duckworth, 1996; Liu, 2000).

China's assimilation of Western child development and early childhood educational values is visible in China and is becoming increasingly popular among Chinese early childhood educators (Chen, 1996; Ye, 1996; Pan, 2000). However, it is noteworthy that none of the authors discussing educational reform in China have addressed children at risk of educational failure. We must consider the question: How does education reform affect children at risk in China?

Special education in the West and in China

In contemporary Western society, the philosophy of educational inclusion follows Dewey's notion that all children should have equal educational opportunity (Cochran-Smith, 2004). Teachers need to believe that all children can achieve and therefore must hold high expectations for all learners; in order to become effective teachers, they need to teach every child no matter the background of the child (Grant & Gillette, 2006).

Special needs children and children at risk, therefore, are included in public educational services with specific learning environments provided for these children to meet their special needs in learning (Gallagher, 1994). Therefore, public education services are inclusive of children with special needs. Teacher preparation for working

with children with special needs children is emphasized with collaboration with general education; teachers working with children with special needs receive special and additional training to develop large sets of strategies to help these children (Cochran-Smith & Zeichner, 2005).

In China, special education has provided educational services for children who are blind and/or deaf in special schools, and in some areas, for children with mental retardation. Children with special needs go to these special schools for their educational learning. However, until 1980, there were no special education teacher training institutes in China. Most teachers in special schools were selected from regular schools (Zhao, 1991). New teachers in special schools "learned by doing" or by following experienced teachers. The situation has changed since 1980. Today teachers can receive their pre-service or in-service training in two kinds of teacher training institutes: special education teacher training institutes and the special education division in normal (teacher) universities (Zhao, 1991). In recent years, more attention has been given to the education of infants and preschoolers with disabilities. Many early intervention programs, public and private, involving not only teachers but also medical personnel and parents, have operated for preschool children with disabilities (Yang & Wang, 1994).

However, special education in China is still facing the huge problem of establishing training programs for special education teachers and the facilities needed for special education. Most provinces in China are slow in developing special education; a few provinces have made no progress whatsoever (Zhao, 1991). As Zhao Yongpin, the head

of the Special Education Department in the China State Education Commission, points out, the main reason for the delay may be short-sighted and/or stereotypical ideas: "When some officials think about compulsory education, they don't include children with disabilities as the service recipients" (Zhao, 1991). According to Piao's (1991) view, China will need 388,000 special education teachers by the year 2000. To meet this need, China must train nearly 40,000 teachers each year. However, only 3,000 pre-service teachers graduate from teacher training institutes, and fewer than 100 students with special education majors graduate from normal universities each year. A great deal of work still needs to be done in this area. China still has many problems to overcome, such as lack of funding and qualified special education personnel (Zhao, 1991). In recent years, Global 2000, UNICEF, and other international agencies or organizations have provided support for conducting teacher training programs, sending instructional equipment, and providing financial aid to China. Their support has greatly promoted the development of special education in China (Yang & Wang, 1994).

Issues on institutionalized children in China

Children Social Welfare Institutions (CSWI) in China house homeless children and are run by the Chinese government. The numbers of abandoned children were high in the early 1990s due to the family planning policy and the traditional value Chinese place on boy children; as a result, most abandoned children were girls. The living conditions needed to meet the basic needs of children in institutional care have improved since the

mid-1990s in CSWI (Johnson, 2003). However, problems affecting the development of the children living in institutions are universal, and Chinese orphanage children are no exception; orphanage children suffer from developmental delays in all areas. In Miller and Hendrie's study (2000) on children adopted from China, they found physical growth and developmental delays similar to other groups of children adopted internationally. Other literature on institutionalized children concluded that children in institutional settings have less frequent contact with adult and more impersonal care; as a result their social behaviors depart from normal development. They tend to be less responsive to the environment, less competent in manipulating objects, and less capable of picking up social cues from adults (Rheingold, 1956).

Children living in institutional environments are also considered as children with special needs in China. However, little attention has been paid to professional development for people working at the Chinese social welfare institutions for children. Moreover, there is little research on the development of institutionalized children in Chinese research. The principal investigator of this study has visited more than thirty children welfare institutions in China in the last ten years. During her working experience in the past ten years, the investigator observed that only those institutions with more financial support from the local government or international organizations in the economically well-developed regions in China were able to send some staff for training on special education teaching methods. However, no training about the development of institutionalized children was available for staff working with children in the institutions

in China. Therefore, there were no educational opportunities for institutionalized children during their preschool years. When these children reached their school age, they appeared to have developmental delays and fell to the bottom of academic achievement at the primary schools they attended. In addition, according to John Bowlby (1960), early years of grief and mourning are associated with relationship-building in later years; dysfunctional attachment is directly related to the developmental delay of children. Therefore, helping children in Chinese children welfare institutions enhance their prospects given development delays is the mission of the Half the Sky Foundation. In addition to teacher development centering on constructivist beliefs in teaching practices (the theories of constructivism discussed at length above), the HTS mission relies on teacher training and professional development focusing on strengthening teacher efficacy and tolerance of ambiguity to enhance the teachers' professional competence in relationship-based child-centered and constructivist teaching and learning.

Areas of professional development for the Half the Sky teachers

Teacher Efficacy. Teacher efficacy is a teacher's self-judgment about capabilities to influence student engagement and learning, even among those students who may be difficult or unmotivated (Hoy, 2000). Teachers with a strong sense of efficacy tend to exhibit greater levels of planning, organization, and enthusiasm and spend more time teaching in areas where their sense of efficacy is higher. Teachers tend to avoid subjects and topics when efficacy is lower. Teachers with a strong sense of efficacy tend to be

more open to new ideas, more willing to experiment with new methods to better meet the needs of their students, and more committed to teaching. They also persist when things do not go smoothly and are more resilient in the face of setbacks; they tend to be less critical of students who make errors and to work longer with a student who is struggling (Ross, 1994; Tschannen-Moran & Woolfolk Hoy, 2001). A teacher working with children with developmental delays will be better able to be supportive, responsive, sensitive, and flexible if s/he has a strong sense of efficacy.

Teacher efficacy is derived from the self-efficacy theory that plays a large role in learning and motivation (Bandura, 1977). Bandura's theory of self-efficacy suggests that efficacy may be most malleable early in learning. Thus, one's first years of teaching may be critical to the long-term development of teacher efficacy (Hoy, 2000). Woolfolk and Hoy (1990) conducted a study on the efficacy beliefs and attitudes toward children of pre-service teachers. Their study found that those with a low sense of teacher efficacy tended to be oriented toward control, to view students' motivation pessimistically, and to rely on strict classroom regulations, extrinsic rewards, and punishments to make students study. Other studies on teacher efficacy of novice teachers have revealed a strong link between teacher preparation and levels of teacher efficacy (E.g.: Burley, Hall, Villeme, & Brockmeier, 1991; Hall, et al, 1992). These studies suggested that efficacy beliefs of first-year teachers are related to stress and commitment to teaching as well as to satisfaction with support and preparation. The results demonstrate that novice teachers completing their first year of teaching who had a high sense of teacher efficacy had

greater satisfaction in teaching, had more positive reactions to teaching, and experienced less stress. Confident new teachers gave higher ratings about the adequacy of support they had received than did those who ended their first year with a shakier sense of their own competence and a less optimistic view of what teachers could accomplish. These studies provide strong evidence that initial training and professional development is critical to long term efficacy because once established, efficacy beliefs of experienced teachers seem resistant to change (Hoy, 2000).

Tolerance for Ambiguity. The theory of tolerance for ambiguity is a conceptual framework about intellectual and reflective competence in dealing with uncertainty and ambiguous situations. High tolerance for ambiguity is an ability to accept ambiguity and lack of clarity and to be able to deal with it constructively (Bryam et al, 2004).

Tolerance for ambiguity has been highlighted as important in the development of creative and reflective thinking in teachers (DeRoma, Martin, & Kessler, 2003). Grant (2001) conducted a qualitative study on pre-service teachers to investigate how reflective thinking and teaching are related to tolerance of ambiguity. Based on the thoughts recorded in pre-service teachers' journal reporting, Grant identified three groups of pre-service teachers as (a) Uncertain Inquirers; (b) Cheerful Muddlers; and (c) Direction Followers. The results show that those future teachers who were most effective at creating and implementing successful activities in their classroom looked at their experiences in profoundly different ways from their classmates; these pre-service teachers were from the group of Uncertain Inquirers. Their journals differed from the

others in three ways: (a) the quality and quantity of cognitive effort they put into teaching and reflecting about teaching; (b) their tolerance for ambiguity; and (c) the complex ways in which they understood the relationship between emotions and learning. This study found that pre-service teachers with high levels of tolerance for ambiguity tended to ask more questions and make tentative hypotheses; they made their teaching experience ambiguous and confusing through their ability to observe more thoroughly and accurately, taking into account more aspects of teaching and learning. In contrast, the other two groups did not show any interest in asking questions and took the teaching experience as a series of true-false items that either worked or did not.

Tolerance for ambiguity is also associated with innovation and creativity in human beings. Situations involving innovation necessarily include change; change, in turn, produces ambiguity. Therefore, tolerance for ambiguity is a likely predictor of innovativeness (Nicotera et al, 1990). Nicotera, Smilowitz & Pearson (1990) conducted a study on 270 American public schools teachers and found that the level of tolerance for ambiguity was highly related to the level of innovation and creativity in teachers. These results suggest that the ability to tolerate ambiguity in problem solving, combined with a commitment to managing conflict in a cooperative way and a general tolerance of ambiguity about one's job, is a predictor of individual innovation.

Constructivist Beliefs. The worldview of learning in a constructivist approach believes that people construct their knowledge through observations and interactions with the environment around them. A theory based on observation and scientific study about

how people learn, constructivism argues that people construct their knowledge about the world around them through experiencing things and reflecting on those things, and thus people are active in creating knowledge by asking questions, exploring, and assessing what they know (Bransford & Stein, 1993). There are two members of the constructivism family in education (Phillip, 2000). One is psychological constructivism, grounded in Piaget's cognitive theory, and the other is social constructivism, following Dewey and Vygotsky.

Psychological constructivism as proposed by Bruner (1960) emphasizes the student's active role in the learning process. In other words, the learner formulates hypotheses, constructs new ideas, and selects information that is then integrated into existing knowledge and experience. This belief is rooted in Piaget's cognitive theory that people actively construct their own knowledge from the stimuli around them.

Constructivist education is based on this premise of successive knowledge-building that increases in depth and complexity from stage to stage (Bruner, 1960). It holds that learners actively construct their own sets of meanings or understandings; knowledge is not a mere copy of the external world, nor is knowledge acquired by passive absorption or by simple transference from one person to another (Phillip, 2000).

In contrast to the individual-cognitive constructivist based on Piaget's cognitive theory, the sociocultural constructivist, e.g., John Dewey, Lev Vygotsky, Jerome Bruner, and Howard Gardner, locates the mind in the individual-in-social action. Learning, then, is primarily a process of enculturation into a community of practice (Gredler, 1997).

Bruner (1966) advocated teaching activities that allow students to discover and construct knowledge. Vygotsky proposed a theory of cognitive development that emphasizes the underlying process rather than the ultimate stage of development as psychological constructivism proposed. He examined the relationship between the cognitive process and the subject's social activities, and is well known for his sociocultural theory of development that focuses on the "zone of proximal development" (Hausfather, 1996). According to this theory, learning takes place when students solve problems beyond their actual developmental level (but within their level of potential development) under adult guidance or in collaboration with more capable peers (Crawford, 1996). This theory holds that the disciplines or bodies of knowledge built up during the course of human history are socially constructed (Phillip, 2000).

Summary

This review explores cultural meanings of teaching and learning in order to explain conflicts in Chinese education reform associated with teacher preparation in China. This review compared theoretical work between the Western and Chinese worldviews in teaching and learning. This review also stressed the needs of institutionalized children in China, providing a theoretical framework of teacher development. Specifically, teacher efficacy, tolerance of ambiguity, and constructivist beliefs address the innovative intervention curriculum and teacher training for working more effectively with these children.

Chapter 3

METHODOLOGY

Participants

The study participants were twenty teachers newly hired by the Half the Sky (HTS) Foundation through its normal hiring process, who were ready to commence work at the end of 2005 and continue through 2006. The participants were all females due largely to the cultural preference for females in the early childhood profession in China. The age, educational background, teaching experience, marital status, and number of children of these participants varied; participants ranged from 20 to 45 years old. Among the twenty participants, ten teachers were hired from outside the institution and another ten were teachers at the institution who had worked for an average of 15.7 years with the children living there. The teachers hired from within the institution had teaching certificates from the educational bureau of the local government. The teachers hired from outside the institution had some early childhood training and practice except for one, Participant 15, who worked as a human resources manager in a business before being trained as a Half the Sky teacher. The rest of the participants hired from outside the institution held a three-year associate's degree beyond their high school diploma. The average age of the teachers from inside the institution was 38.2 years old, and the average age of teachers hired from outside the institution was 25.1 years old. Twelve participants were married, and all of these married teachers had at least one child each.

The primary investigator met with all the participants prior to their becoming HTS teachers, explained the current study, and invited them to participate. Then the investigator passed out the consent letter (Appendix 1) to each of the participants and asked them to read carefully before signing. This study recruited twenty teachers who agreed to participate in this study; all teachers in the HTS cohort 2005-6 agreed to participate.

The background of the training and the support system for their teaching

Prior to beginning to work with the children in their own classrooms, participants attended one month of intensive training led by the investigator, who is the Director of Half the Sky Little Sisters Preschool Program. The initial training covered studies of brain and attachment development, developmental characteristics of institutionalized children, and American progressive education and the Italian Reggio Emilia approach in a Chinese context. The teachers engaged in teacher practice in a classroom with institutionalized children that included observing, curriculum planning, and instruction. Throughout the training, teachers were taught and encouraged to reflect on and evaluate the changes in their own thinking and understandings.

After they began working with children as HTS teachers, they received careful supervision and various forms of support in their on-the-job professional development. They took advantage of opportunities for communication (including electronic

communication, through their own special website) with all the teachers across China in Half the Sky programs about issues related to their work.

Research design

Mixed methods design. The study design involved both qualitative and quantitative data methods. Often the best results are achieved through mixed-method evaluations, those that combine quantitative and qualitative techniques (Frechtling & Westat, 1997). The results of a study are best explained when viewed from several perspectives, or through several methods; this way the diversity of approaches overcomes the deficiencies of any single method (Brock, 2005).

Qualitative research is usually conducted in a natural setting in which the researcher collects data in the field by gathering words or artifacts, analyzes them inductively, and focuses on the meaning of the experiences for the participants; he or she describes what happened, how it happened, and how the participant experienced the process (Stake, 1995). Creswell (1998) defines qualitative study as follows:

Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting. (p.15)

Qualitative research and quantitative research have different intents. Qualitative research helps the investigator to discern the participants' views about a particular

phenomenon. On the other hand, the intent of quantitative research is to see how data provided by participants fits an existing theory, model, framework, or explanation (Creswell & Clark, 2007).

The purpose of this research is to study a group of new teachers adapting Western educational concepts for use with a group of high-risk Chinese children. Based on analyzing these teachers' views, this study seeks to discover how Chinese teachers experienced adapting foreign concepts to their own culture's teaching practices. It also examines whether this process had an impact on the development of this group of teachers and, particularly, to what extent the frameworks of teachers' constructive beliefs reflect the teachers' adaptation process. Since neither a qualitative nor a quantitative approach is completely adequate to address the research question, a mixed-methods approach was the preferred design. The combined data provide a more complete picture; they provide insight into trends and generalizations as well as in-depth knowledge of the participants' experiences and perspectives (Creswell & Clark, 2007). The qualitative data, in particular, helps gain in-depth understanding of the teachers' development as opposed to generalizable data (Stake, 1995) and is helpful to the author and to Half the Sky Foundation in future work.

An embedded mixed-methods design was employed for this study. Both qualitative and quantitative data sets were collected concurrently at several times over a one-year period. In an embedded mixed methods design, one data set serves a supportive, secondary role in a study based primarily on the other data set (Creswell & Clark, 2007).

According to Creswell and Clark (2007), researchers may make interpretations from the secondary, embedded data set by bringing the two data sets together in the concurrent approach; this yields more complete interpretations and explanations of the results. One of the attractive features of the embedded design is that it allows a researcher who needs qualitative information after the intervention to follow up on certain types of outcomes (Creswell & Clark, 2007). In this study, the quantitative data were embedded within a qualitative design. The qualitative and quantitative data were used to answer different but complementary research questions in the study (Hanson et al., 2005). To better interpret the findings, the researcher followed up on the results of training by interviewing participants using questionnaires, two timeline self drawings as pre-measure and post-measure, and field observational notes. The research design of this study was to consider the training and the first year experience working in the Half the Sky intervention program as a form of experiment following the pre-measure. The post-measure examined the impacts of the experiment. (See Figure 3.1: Diagram of the embedded mixed-methods design.)

The qualitative inquiry of this research was a case study to describe the responses of the teachers at the Guangzhou Children's Welfare Institution in China to their experiences adapting Western educational approaches to Chinese institutionalized children. According to Creswell (1998), a case study is an exploration of a "bounded system" or a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context. This system is bounded by time

and place and is a case being studied, whether program, event, or individuals (p. 61). This study explored the descriptions of a group of teachers in their first year of teaching preschool for Half the Sky Foundation.

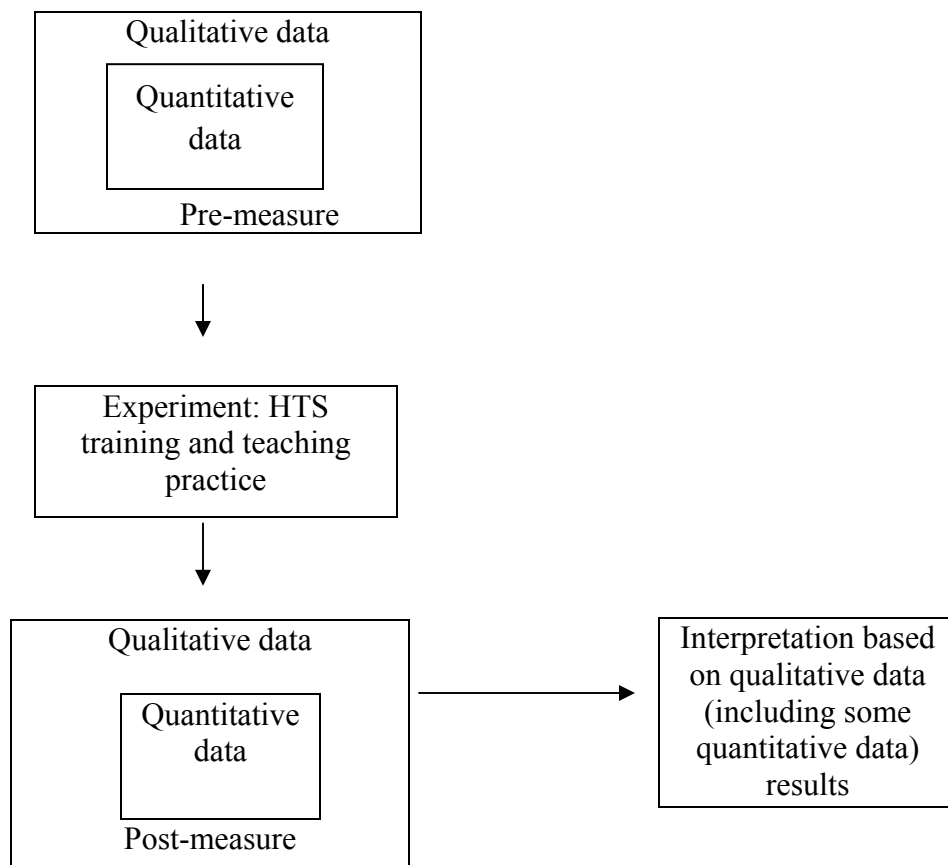


Figure 3.1: *Diagram of the embedded mixed-methods design*

Measures. The qualitative data involved personal interviews with teachers and drawings of themselves depicting the relationships between teacher and child as well as field notes from research assistants. Each participant was asked to make a drawing of her

perception of the teacher-child relationship, focusing on teaching and learning, as pre-measure and post-measure. The self drawings were done prior to the training and after one year of teaching practice in the HTS program. The interviews were used as post-measure with open-ended questions about the experiences of the first six months of teaching practice using the combined Western-Chinese teaching approach with institutionalized children at Guangzhou Children's Welfare Institution. There were ten questions addressing the experience of their first month's teaching; their feelings at different times; detailed, telling examples of what seemed successes and failures at the time but about which they later had different perspectives; and the changes in themselves (Appendix 2). The interview data were intended to explore the central phenomenon of the adaptation process of this group of teachers at Guangzhou Children's Welfare Institution. Research assistants completed observation notes of the teachers in classroom teaching during their visits to the site.

The quantitative data used self-report instruments that included Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs. This data set was intended to measure the beliefs and self-perceptions of this group of teachers at two different times: before the program and at the twelfth month of the program. (See Table 3.1: Mixed-methods data collection matrix.)

Table 3.1
Mixed-methods data collection matrix

	Before the training	at 1st month	at the 6th month	at the 12th month
Qualitative data	Self drawing	Field Notes	Interviews/ Field Notes/	Self drawing
Quantitative data	TE*, TA**, CB***, Pre-measure			TE, TA, CB Post-measure

*TE: Teacher Efficacy Measure

**TA: Tolerance of Ambiguity Measure

***Constructivist Beliefs Measure

The procedure for qualitative data collection

(1) *Self drawing*. Each participant was asked to draw a self-portrait about her perception of the relationship between teacher and child before the training started and a year later in the program. For the pre-test measure, different sizes of paper and color crayons were provided for the participants. The participants were asked to select any size paper they wanted and could use either single or multiple to draw their own pictures. The participants were given approximately thirty to forty minutes to finish their drawings. When finished, each participant was invited to a room with the primary investigator to explain her drawing individually, and the investigator took written notes that were saved with the drawing. The drawings were then put aside by the primary investigator for later analysis. One year later, the primary investigator visited the participants at Guangzhou

SWI to collect drawings again for the post-test measure. For the post-test measure, the participants were given an 8 by 11 inch piece of paper (standardized for the convenience of the investigator's travel). The participants were asked to draw a picture answering the same question as the pre-test: What is your perception of teacher-child relationship? On this occasion, participants took the page home to work on it and turned in their drawings to the investigator the next day when they came to work.

(2) *Field notes.* Over the course of the twelve-month program, two research assistants in China hired by the primary investigator paid two visits to participants' classrooms to observe the teachers' work with children. The first visit was in the first month of the program. The second visit was six months into the operation of the program. The research assistants submitted their observations of each visit to the primary investigator as part of the qualitative data collection. These notes were supplemental documents to verify the self-report data of the participants.

(3) *The interview.* The research assistants in China who observed the participants also conducted interviews with teachers at the six-month point using the open-ended interview questions (see Appendix 2). The research assistants traveled to the sites where each participant worked to conduct the interviews, which were audiotaped and lasted up to 60 minutes. All twenty teachers in the participant pool were interviewed.

Afterward, each assistant transcribed the other's taped interviews in Chinese. The process preserved confidentiality for the participants' benefit.

Qualitative data analysis

The core feature of qualitative data analysis is the coding process (Creswell & Clark, 2007). The function of coding is to inductively categorize the data according to trends and similar meanings and to group them together for further analysis and interpretation (Denzin & Lincoln, 2000).

The investigator reviewed all the drawings, field notes, and interviews carefully, then listed the descriptive notes of the interviews and field notes to prepare the codes. Each interview transcript was broken down into small units such as phrases, sentences or paragraphs (Creswell & Clark, 2007), and then each unit was assigned a label based on the direct interpretation of the unit. This strategy used in case studies to begin analyzing the data is called “direct interpretation” by Stake (1995). The primary investigator read and re-read the notes to form over thirty codes and then to revise the codes. As coding and recoding were in process, broader categories emerged, and the codes that had connections in meaning and contents were clustered. This strategy used in case study analysis is named “aggregation” by Stake (1995); the embedded themes, broad dimensions, and perspectives linked to the findings of the research questions become explicit. In the end, five themes emerged for discussion and analysis.

The drawings were coded in a similar manner. The investigator examined the drawings and made notes about the relationships between teachers and children and about teaching and learning expressed through the drawings. Each participant wrote a description on the back to explain her drawing. Then these notes and explanations of the

drawings were coded in the same manner as the interviews. First, the investigator broke down the descriptions of the drawings and notes into small units; then these small units were compared and clustered with similar meanings to form the codes. Finally, the codes of the interviews and the codes of the drawings were merged into a unified set of codes for both interviews and drawings.

Validity and reliability of qualitative data

Validating the data helps control the quality of data and results (Creswell & Clark, 2007). In qualitative research, the focus on validity is to determine whether the account provided by the researcher and the participants is accurate, trustworthy, and credible (Lincoln & Guba, 1985).

To reduce the distortion of the participants' concepts caused by translating them into English, much of the analysis was conducted in Chinese, and only translated later as part of the process of preparing this dissertation. For example, the original transcripts of interviews (in Chinese) were coded for themes (originally identified in Chinese). (See Appendix 6) After the codes were developed and theme categories identified, then they were translated into English.

A strategy of member checking was also used to validate the data (Creswell & Clark, 2007). The researcher took the summaries of findings, such as the major themes and interpretation of the interviews, to the participants to ask them about the accuracy of

the representations of their experiences. There was no disagreement on the findings from the participants.

In order to determine whether the codes were reliable, a reliability check was performed using a strategy of intercoder agreement (Creswell & Clark, 2007). Other individuals were invited to code the same transcript. One was a Chinese graduate student, and the other was a Chinese faculty member, both studying and working at the University of Nebraska-Lincoln. Then the codes were compared to see whether there was agreement on the codes to the text passage. Coders identified the agreement of each code until all the agreements were arrived at to ensure the reliability of the codes.

Instrumentation in quantitative method

The quantitative methods of this study involved questionnaires to study changes over time in the teacher participants' beliefs and reflections on their practices. Three questionnaires were used (Appendix 3), plus a background information form (Appendix 4). They were translated into Mandarin Chinese by a graduate student bilingual in Chinese and English, and translated back into English by another bilingual professor. Then both translations were checked and compared to verify the validity of the translation until agreement on the translation was met.

(1) Teacher Efficacy Questionnaire: This questionnaire measures teachers' self-confidence about their power to affect student learning and change (Henson, 2001; Wheatley, 2002). The use of this questionnaire is based on findings that teachers' beliefs

in their efficacy, or agency, to influence children's learning are a very strong indicator of teaching effectiveness (Bandura, 1997; Lin & Gorrell, 2001).

Although the instrument of teacher efficacy was developed in Western society, it has been applied to other cultures, including Taiwan (Lin & Gorrell, 2001). The present study employs the version of the teacher efficacy measurement modified by Lin and Gorrell (2001); it departs from the Gibson and Dembo (1984) two-factor teacher efficacy scale. The literature has suggested that the teacher concept is more differentiated in some countries and is strongly influenced by unique features inherent to a given culture (Lin & Gorrell, 2001). According to Lin and Gorrell (2001) the instrument modified for the Chinese population supports the validity of the instruments and the reliability of the results. The internal reliability of this instrument reported by Lin and Gorrell (2001) in their study was $\alpha = .57$.

There are twenty items on the questionnaire, each with a rating scale of 4, ranging from "strongly disagree" to "strongly agree," about different situations involving children's learning behaviors, home and school relationships, and competence in classroom teaching. The scale is 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. There are six items that are reverse scored (item 1, item 4, item 6, item 7, item 9, and item 19), and then the participants' ratings for each item are added together to yield a total score, where higher scores indicate higher teacher self-efficacy.

Cronbach's alpha for this instrument within this sample is .459 in the pre-measure and .627 in the post-measure, which indicates the scores in the post-measure are

more reliable than the scores in the pre-measure. Therefore, the interpretation of the results may rely more on the post-measure of this instrument.

(2) *Tolerance of Ambiguity*: This instrument assesses a teacher's capacity to endure uncertainty in teaching-related decisions made in ambiguous situations. The capacity to tolerate uncertainty is closely related to the levels of reflective thinking and teaching practice (Budner, 1962; Furnham & Ribchester, 1995; McLain, 1993; Yurtsever, 2000). The instrument employed in this study was the Multiple Stimulus Types Ambiguity Tolerance (MSTAT) test, which measures common reactions to several types of ambiguous stimuli (McLain, 1993). McLain (1993) reported the reliability coefficient $\alpha = 0.86$ for the MSTAT instrument. The MSTAT instrument is made up of twenty-two items with a rating scale from 1 to 7, ranging from "almost totally disagree" to "almost totally agree" where 1 = almost totally disagree, 2 = mostly disagree, 3 = slightly disagree, 4 = neither agree nor disagree, 5 = slightly agree, 6 = mostly agree, and 7 = almost totally agree. Some items ask how a teacher would react to uncertain decisions or teaching situations. For instance, items 1 and 2, *I don't tolerate ambiguous situations well*; *I find it difficult to respond when faced with an unexpected event*; and item 6, *I try to avoid situations which are ambiguous*, are intended to discover how well teachers tolerate ambiguity. Other items focus on assessing how flexible teachers are and how capably they reflect on various perspectives; for example, items 4 and 5: *I'm drawn to situations which can be interpreted in more than one way*; *I would rather avoid solving a problem that must be viewed from several different perspectives*. Item 20 measures how

comfortable teachers are about making decisions about situations with an uncertain outcome: *I find it hard to make a choice when the outcome is uncertain*. There are ten items that are reverse scored prior to calculation of a total score calculation purpose. They are items 1, 2, 5, 6, 8, 9, 10, 13, 16, and 20. On the total score, a higher number indicates a greater tolerance for ambiguity.

The Cronbach's alpha for this sample is .752 for re-measure and .864 for post-measure, which indicates the scores of this sample with this instrument are highly reliable both for pre-test and post-test.

(3) *Constructivist Beliefs*: This instrument measures whether there is a constructivist aspect to a teacher's beliefs about best practices for teaching and learning in early childhood education. The implicit standard for "best practices" is the National Association for the Education of Young Children (NAEYC) professional standards of developmentally appropriate practices (Smith, 1997; Vartuli, 1999). This measure of Constructivist Beliefs is a new measure developed by Carolyn Edwards of the University of Nebraska and Misuk Kim of Chung Ang University of Seoul, South Korea, for the purpose of studying constructivism in teacher reflective practice. There are eighteen items with rating scales from 1 to 4, as 1 = strongly disagree, 2 = generally disagree, 3 = generally agree, and 4 = strongly agree. The 18 items cover topics of physical environment, learning in the classroom, attitude toward parents' involvement, curriculum planning strategies, attitude toward social interactions of children, and beliefs of self as a learner (three items each, one indicative of non-constructivism, one of individual

constructivism, and one of social constructivism). A total score is computed by adding the scores of all 18 items together (after reversing scores for the non-constructivist items). No reliability and validity evaluations have been conducted for this instrument, as it is still in the experimental stage of development. The Cronbach's alpha for this scale within this sample is .172 for the pre-measure and .432 for the post measure. Since Cronbach's alpha is quite low for both pre- and post-measures of this instrument, individual items analysis may be provided in the discussion section instead of the whole scale to integrate the qualitative results for a more reliable interpretation.

Procedures for quantitative data collection

The three questionnaires were administered at the very start of the teacher training institute held by the Half the Sky Foundation in Guangzhou, China, at the end of 2005. Confidentiality and informed consent were explained, and teachers who agreed to participate filled out the questionnaires individually; afterwards each person's pages were placed in a sealed envelope with her name on the outside. These envelopes were stored until all data were collected. The questionnaires were administered again at the twelfth month in January 2007, when the same procedure for preserving confidentiality was followed.

Quantitative data analysis

Since the purpose of this study was to track the changes in participants across a 12-month time period, repeated measures analyses were performed. Repeated measures designs are often used to track changes in the same subjects over time (Tabachnick & Fidell, 2001).

First, a t-test was performed to compare the mean scores of the three pre-tests and post-tests. Then, to determine whether the changes over time were observed in a similar or different way for teachers who came from inside versus outside the institution, a two-factor repeated measures ANOVA design was employed to analyze the data with Time (pre-test vs. post-test) as a within-subjects factor and prior workplace (PW) as a between-subjects factor to compare participants from inside the institution versus outside the institution.

This design was intended to answer the research question of this study: Are there any changes in the level of teacher efficacy, tolerance of ambiguity, and constructivist beliefs of this group of participants after a year in the program? This study also examined the differences in changes of teacher efficacy, tolerance of ambiguity, and constructivist beliefs between the teachers hired from outside and the teachers hired from inside the institution.

Analysis in mixed-methods design

This study employed an embedded mixed-methods design in which quantitative data was supplemental to and embedded inside the primary qualitative design. This analysis took a concurrent approach in that qualitative and quantitative methods were implemented during the same period (Creswell & Clark, 2007). In other words, both qualitative and quantitative data were collected, analyzed, and interpreted at the same time. First, qualitative and quantitative data were each analyzed separately. Then the results were merged during interpretation. The quantitative results were identified and then applied to the qualitative results. The significant results of the quantitative data were used to compare and explain the qualitative results for the interpretation.

Both qualitative and quantitative results were used to address the major research question concerning how Chinese teachers adapted the Western combined Chinese teaching practice. The findings revealed both the quantitative changes and the qualitative processes underlying transformations in the participants' beliefs and perceptions about their teaching of young children in welfare institutions. The mixed methods design was employed to make the interpretation of the results more complete and holistic (Creswell & Clark, 2007).

Chapter 4

QUALITATIVE RESULTS

The design of this study is a qualitative case study that describes the first-year teaching experience of a group of twenty teachers. Their experience is unique because they developed a teaching style that blends Western educational approaches with Chinese practices. This teaching style was implemented in teaching institutionalized children at the Guangzhou Social Welfare Institution (SWI).

The institution sits near a green hill in a suburban area in Guangzhou, China. There are two buildings in the institution. The large building has four floors with extended wings to both sides. Children live in the rooms of these extended wings attached to the building. The Half the Sky foundation renovated the rooms in the large building and turned them into Half the Sky classrooms. The classrooms are located on the second and third floors in the center of the building. There are eight classrooms on both floors. The colors of each room are warm, bright, gentle, and calm using similar patterns of light yellow, green and blue. Each class is designed with lower shelves where children can reach the materials and toys they want. Many toys were brought from United States that are developmentally appropriate for these children including dress up clothes, creative art materials, soft dolls and cribs, and dramatic play sets. Half the Sky also created a reading room and creative art room on the third floor.

The children who attend the program range in ages from two years old to eight years old. The program begins at 8:30 in the morning. At 11:30 A.M., the children break for lunch and go back to their dorm rooms for a nap. The program resumes at 2:00 P.M. and ends at 4:00 P.M. for the day. Everyday teachers pick up the children from their dorms and bring them back to the dorms. There are now three teachers working together and twelve to eighteen children in each classroom, depending on the ages..

Before the Half the Sky program came to the Guangzhou SWI, preschool age children had little classroom experience with the institution's teachers. The teachers of the institution were trained in Chinese traditional methods and were certified by the educational bureau of the local government. The average age of the teachers in the institution was 38.5 years old. The teachers worked individually with a group of twelve children in each room mainly to keep the children safe without getting hurt or having an accident. The rooms were simple; they lacked toys and colors. The most prominent classroom furniture was the child-sized tables and chairs. There was a lack of activities and materials provided for the children. The children were simply required to sit still and be quiet when the teacher was talking, following the teachers' plans and doing the same activities. Most of the time, the teachers taught songs to the children through repetitive reciting practices. The children seemed to follow order well, yet they showed a lack of alertness and fear of new stimuli, including outside noises and people new to them. The children spent about four hours a day with their teachers and then were sent back to their dorms for the rest of the day.

There were twenty teachers working at the Half the Sky program who were the participants for this study. Ten teachers who already worked at the institution were assigned by the director to work as Half the Sky teachers. The other ten teachers were hired from outside the institution through a competitive hiring process. The teachers from within the institution are referred to as Participants from 1 to 10, and the teachers from outside referred to as Participants from 11 to 20 in the following illustrations of the results.

The qualitative data included self drawings from the participants prior to the training and at the twelfth month of the program operation, field notes and observations from the research assistants at the first month and at the sixth month of the program in operation, and personal interviews with each participant after six months of working at Half the Sky intervention program.

The following section analyzes the findings of the self drawings; then we will discuss five themes emerged based on this set of qualitative data.

The findings on self drawings

The drawings of the pre-measure were grouped into three categories based on the notes of the pictures. The first category concerned in the context of the classroom where drawings revealed distant teachers with a lack of facial expressions engaged in leading teacher-led activities; the second category focused on teacher-child relationships that invoked traditional Chinese images of plants to represent the children and the Sun as the teachers; the third category focused on the nature of and play among teachers and

children. Then the notes were combined with the description of each drawing in order to identify a collection of instances relevant to each other. The first two categories indicated authority, control, and power of teachers over children, which was relevant to the original code of “expecting obedience from children” in the interviews. Therefore, the first two categories of drawings were clustered into a new code of “teachers as authorities.” The drawings of the post-measure were also divided into three categories based on the contexts depicted in the drawings and the descriptions from the participants. The first category included those drawings depicting nurturing relationships between teachers and children, including heart shapes to represent love, closeness between teachers and children with different body languages such as hugging, holding hands, teachers kneeling beside children, teachers wiping tears from a child, etc. The second category centered on teachers and children learning together. The third category concerned playing and exploring in nature. The first category was relevant to the code in the interview called “building relationships”; the second and the third categories were integrated into the code called “learning environment” for the interviews.

It is interesting to note that Participant 13’s drawing was the only one in the pre-measure drawings that depicted the children at play. Participant 13 was a teacher at a local day care center prior to becoming a HTS teacher. Apparently, she was exposed to some of the new ideas on early childhood education reform in China that emphasize the importance of play for young children.

The following section investigates the findings of the five themes derived from the interviews, the self drawings, and the field notes. They were: 1) Order vs. Disorder, 2) Opening up, 3) Self confidence, 4) Reflection, and 5) Personal relationship. These themes were interconnected with each other and revealed the unique experience holistically of this group of teachers' learning journey.

1. Order vs. disorder

At the beginning of the program, each participant encountered enormous difficulties in adapting the new Western educational worldview to the hands-on practice with institutionalized children. The difficulties the teachers faced included a lack of understanding of the unique developmental needs of children from a deprived environment, lack of collaborative teamwork in terms of open communication, and the conflict between traditional Chinese teaching practices and the Half the Sky curriculum. In order to paint a complete picture of this theme, we must examine the obstacles and conflicts that developed in order to create a greater understanding of the conception of order and disorder using different aspects of the data. The main obstacles and conflicts resulted from the different worldviews and cultural practices of the Western and Chinese societies encountered by the participants during the early days in the program. These obstacles and conflicts were characterized as chaos in classrooms, lack of open communication, and emotional turmoil by the participants.

Obstacle 1: The difficulty in finding strategies to help children with behavioral, learning, and emotional problems as a result of an emotionally and cognitively deprived environment.

The obstacle that presented an important challenge to participants was to understand the unique needs of the institutionalized children. All of the participants described their difficult experiences when dealing with these children during the early days of the program. Some talked about the children's behavioral problems that puzzled the teachers and made them feel uneasy. This was illustrated by Participant 15 and Participant 20. Of a particular child, Participant 15 stated, "No matter how I tried to interact and play with her, the child had no response at all and didn't have any eye contact with me everyday at the beginning. (一开始, 无论我如何我怎样与她沟通或嬉戏, 她对我没有任何的反应)" (Interview, June, 2006). Participant 20 experienced a behavioral problem of the complete opposite nature: "Whenever it was not going his way, even just a little, he would throw things and then himself on the floor crying; sometimes he would take off all his clothes even when it was very cold" ("如果他没有得到他想要的, 哪怕是一点点, 他就会躺在地上或是摔东西哭喊着; 有时候甚至会脱掉自己的衣服, 哪怕天很冷") (Interview, June, 2006).

Some participants felt helpless when facing a child's emotional bursts. Participant 13, who had just graduated from normal school, recalled her first days of work with these children:

There were cries everywhere in the room. I didn't know what I should do. The children in my class were younger so I didn't know how to help them. One child wet her pants crying, another child tried to grab a toy from another child, both children started crying. When I tried to hold the child to comfort her, she was scared of me and cried even harder. Many of them refused us teachers to be near them. (刚开始时，教室里到处是哭声，我都不知道该怎么办。我班的孩子偏小所以我不知道该如何去帮助他们。一个孩子裤子尿湿了在哭，另一个孩子在抢其他孩子的玩具，两个孩子都一起哭起来。当我去抱她安慰她时，她对我又产生了害怕，哭得更厉害了。许多孩子都拒绝我们接近她们。)

(Interview, June, 2006)

When children arrive in a new environment, they experience fear and anxiety and are seeking comfort from adults they trust or are familiar with. When a child is emotionally secure with a primary adult, she/he adapts easily to the new environment (Bowlby, 1960). Institutionalized children, on the other hand, who have experienced dysfunctional attachment to the adults around them, are more prone to express their distress and fear when they make a transition to a new environment and new adults. Therefore, the teachers, especially those hired from outside, experienced setbacks due to these children's emotional behaviors in their early days in the program. The children's distress made the new teachers feel uneasy and helpless.

While the teachers who had been hired from outside the institution were experiencing difficulties in understanding the unique needs of the children, the teachers

from inside the institution seemed to experience a more painful process of refuting their past teaching methods and re-learning more nurturing means of building relationships with the institutionalized children. The teachers of the institution faced the challenge of re-shaping their understandings and attitudes toward the children they thought they knew. In the past, they had kept their distance from the children and acted as an authority over them. As Participant 6 states:

We wanted the children to be obedient and to repeat what we taught them. We were satisfied only when the children were able to repeat what we said. Everyday we taught the children without any feelings attached. After becoming a HTS teacher, I had the most difficult time in doing observations of individual children because I didn't know how to pay attention to each of them. (我们想要孩子听话，我们教什么孩子学什么。对这些孩子没有情感的投入。成为小姐妹老师后，最困难的就是写每个孩子的观察记录因为我不知道如何对每个孩子进行关注。) (Interview, June, 2006)

In the Half the Sky program, teachers were trained to become keen observers of each child and to conduct daily observations of each child for curriculum planning and implementation. The teachers from inside the institution now realized that their past teaching hindered the development of the children. Therefore, for these teachers, adapting new teaching practices was not only a matter of learning new skills but also of denying their past teaching practices. "It was a very painful learning process," repeated many of the teachers who had traditional teaching experiences.

Obstacle 2: The challenge of open communication

Being open to communicating with others was emphasized during the first month of training. The Half the Sky intervention curriculum emphasizes collaboration between children and teachers to empower learning in the community of the HTS school. Open communication allows people to share different thoughts and perspectives to reach a higher level of a common goal collaboratively. This emphasis introduced another difficulty for the Chinese teachers during their first days at work for Half the Sky. In Chinese culture, people tend to avoid confrontation in order to maintain social harmony by repressing the self (Kim, Pan, & Park, 1998). Almost all participants expressed some level of anxiety in facing the difficult situation of communicating with others about their own thoughts. When they chose to avoid the conflict, they experienced negative emotions, including anxiety, depression, fear, and stress, all of which affected their psychological well-being.

Participant 13, who had been a local child care teacher before joining the Half the Sky program and who had never worked at the institution, expressed her anxiety in dealing with the obstacle of open communication:

I was always afraid of not doing well and of being judged by the experienced teachers of the institution. I worried so much and was afraid to talk with experienced teachers of the institution about my fears and anxiety. I learned it

was important to talk openly, but I just didn't know how when I saw them. (我总是顾虑自己做得不好而受到院里老师的负面评价。我很担心和院里老师沟通和他们谈我的焦虑和害怕。我知道应该积极坦诚地和他们沟通，但是看到他们时自己又不知道如何去和他们沟通。) (Interview, June, 2006)

Likewise, Participant 17, who had just graduated from normal school at age 19, shared her difficulty in communicating openly with others because of the cultural pressure she felt as a young, inexperienced female:

The biggest difficulty I had at first was communication with my fellow teachers. I am the youngest of all the teachers here and used to listening to others and following the thoughts of people older than myself. When we began working together as a team, I felt so scared to tell my thoughts to other people and was afraid of being perceived as disrespectful to people older than myself by saying something different from them. At the training I felt so good when we listened actively to each other's thoughts in order to create a collaborative working environment. But during the first days at work, I was back to my old self. I felt so worried about myself: the more I tried to avoid the conflicts, the easier I got irritated by others and my emotions easily got out of control. (我最大的困难就

是和其他老师的沟通。我是最小的，习惯听比我大的人的意见和想法。当我们刚开始工作时，我很害怕说出我的想法，担心大家会觉得我对他们不尊重。在培训时，当我经历大家相互倾听对方，共同营造一个协作

的环境时感觉特别好。但在刚开始的工作中，我又回到了过去的我。我很担心自己，越是担心害怕努力避免冲突，越是感到自己心情的烦躁，容易发脾气。) (Interview, June, 2006)

Participant 17 well defined her cultural role as a younger teacher in China. She experienced a conflict between her traditional role of being obedient to teachers older than she and her understanding of the need to be open in communication with her peers. This cultural conflict is explained more in detail in the following section.

Conflict 1: Cooperation vs. collaboration (peihe 配合 Vs. xiezuo 协作)

The concepts of cooperation and collaboration are associated with the construct of communication in terms of teamwork. Many participants described different experiences related to cooperation and collaboration when comparing their previous experiences to the experience of being HTS teachers. According to the Oxford English-Chinese dictionary, the Chinese word for *cooperation* (配合) usually means a willingness to be helpful or to do as asked for a common goal. *Collaboration* (协作) means to work together to create or produce something that involves the validation of each other's thoughts and ideas. Hence, collaboration is the practice of open communication for a higher level of working together while cooperation stresses a leader-follower relationship in the Chinese cultural context.

At the beginning, teachers experienced frustration and confusion when working with one another as a team. Participant 1, a teacher with twenty years experience in the institution, shared her frustration of not being able to work effectively with younger

teachers when she expected younger teachers to cooperate with her: “There was a lack of understanding between our older teachers and the younger ones. I have my own thoughts and wanted them to be cooperative with me. On the other hand, I couldn’t cooperate with the younger teachers (“在老教师和新教师之间缺乏相互理解。我有自己的想法希望新老师能配合我的想法。但是另一方面，我又不知道如何去配合新老师”)

(Interview, June, 2006).

Apparently, the value placed on the Chinese traditional hierarchical relationship had a role in this conflict; experienced and older teachers expected younger teachers to cooperate with them, which in turn made it more difficult, especially at the beginning, for older teachers to understand the value of collaboration and open communication. The lack of positive communication and team work contributed in part to chaos in classroom teaching practices.

Conflict 2: Teacher-centered vs. child-centered teaching practice

In their self drawings, the majority of the participants portrayed the teacher-child relationship as a leader-led relationship in the pre-measure drawings. Nineteen teachers in their drawings expressed similar views about the teacher-child relationship with the teacher as the authority and expert. In ten drawings, the teacher is standing and instructing the children while all the children are sitting listening with the same body posture. Eight other drawings were more symbolic with representations of the teachers as the sun and the children as plants, a common depiction of Chinese education: the sun

indicates power and capability and the flowers' growth is completely dependent on the sun. One teacher drew a crossroads with the teacher standing in the intersection giving directions to the children, which implies that the child's role is to follow the teacher's lead for success. The twentieth drawing provided a different point of view that depicted play between the teacher and the children in a group setting. Thus, all of the drawings but one reflected the Chinese worldview of the hierarchical teacher-child relationship with the emphasis on the teacher's power, authority, knowledge, and control. They revealed the view that children were expected to follow the lead of the teacher in order to be successful in the future.

Since Chinese traditional teaching is teacher-directed and teacher-centered, it emphasizes group-oriented instructions for children to follow. The HTS program, in contrast, focuses on each individual child and following the child's learning needs. This was another huge challenge for this group of teachers. All the participants experienced chaos in their classrooms where toys were broken or scattered everywhere. The children had no direction because teachers were afraid to control the children overtly by providing the necessary guidance for them. Participant 20 vividly illustrated her experience during the first month:

During the first month, I didn't know how to put my hand into real practice.

Children were used to group living and were lacking of self-regulation skills I didn't have good strategies to help children learn self-regulation skills. I only knew I couldn't control the children so I just let the children do whatever they

wanted to do. I was afraid to provide any guidance. It was chaos. I could describe it with a Chinese term '*jifeigoutiao* (鸡飞狗跳),' (translated directly into English as "the chickens are flying and the dogs are jumping everywhere"). I felt I got lost.

(在第一个月，我不知道如何进行实际操作。这些孩子习惯于集体生活，几乎没有自我控制能力，我没有好方法来帮助孩子加强他们的自我控制能力。我只知道不能控制压制孩子，所以我就让孩子们他们想做什么就做什么，不敢用任何的纪律手段。整个教室很乱。我只能用一个成语来形容：鸡飞狗跳。(Interview, June, 2006)

To further illustrate what Participant 20 was dealing with, the following is an excerpt of field notes collected at the first month by the research assistant, which describes the chaos in the classroom situations observed:

January 3, 2006, 9:45 a.m.: When I was walking in the hallway passing the classrooms, the crying was everywhere. One teacher looked very tense while holding a crying child. The child was screaming and struggling to slip down from the teacher's arm. There were two children throwing dolls on the floor, the teachers went to pick the dolls up without redirecting the children to something else appropriate to play. Another two children were fighting over a plastic food toy and were screaming and crying. One of the teachers stopped picking up the dolls and went to these two children. The teacher looked at both children and seemed not to know what to say. (2006年1月3日，当我经过教室走廊时，

我听到的都是孩子的哭声。一位老师正在抱一个哭着的孩子，看上去很紧张。这个孩子哭闹着，挣扎着要从老师怀里溜出来。另外两个孩子把娃娃扔到地上，一位老师走过去把娃娃捡起来，并没有和孩子交谈如何可以用其它方式玩耍。其他两个孩子正在争夺一个塑料玩具，一边哭喊一边抢，老师看上去很无奈。) (Field notes, January, 2006)

The illustrations of Participant 20 and the field notes from the research assistant during the first week of the program operation described a common scene every new teacher in the HTS program experienced during the early days. The chaos experience of the teachers indicated a lack of the skills the teachers had with the institutionalized children and their struggles in dealing with the conflicts and obstacles between Western and Chinese teaching practice.

Other teachers, especially those who had worked at the institution prior to the HTS program, experienced the most difficult adjustment in dealing with the conflict of the new teaching practices. They were used to having power and authority over these children to make them obedient. Now, suddenly, this was not an acceptable role for the teachers, and this adjustment was very emotionally difficult for them. They experienced a sense of loss over what they had before. It involved the refutation of their past teaching practices and the re-conceptualization of their new teaching beliefs which was a painful learning experience for these participants.

Both Participants 8 and 1 were older teachers who had worked for over fifteen years at the institution. Both of them seemed to have experienced the most difficult

transition from the traditional teaching practices to the new teaching practices. Participant 8 said that during the early days she felt agitated, missed the past teaching experience, and was reluctant to work with the new team teachers: “I didn’t want to come back to work and didn’t like to face my new collaborative team teachers (“当时我心情特别烦躁，不想来上班，也不想回来面对新的协作伙伴，好留恋过去的时光”) (Interview, June 2006). She described how she felt in dealing with the adjustment: “When I asked children to read books but none of them listened to me and went to find their own toys to play with, I felt I lost all of my authority and felt so depressed and unhappy about that situation” (“在我想让孩子们去看书，孩子们都去玩玩具，各个都不看书时，我感到我失去了老师的尊严，感到很沮丧也不快乐”) (Interview, June 2006).

Participant 1 said she had the most difficult time using positive guidelines to help the children build self-regulation skills. She was used to employing external controls to make the children obey:

I had the most difficult time in setting up the routines with children. I had taught these children before and it was easy for me to keep them listening to me because I used to have the power and control and could make them to be quiet. I used to not allow the children to move and talk when they were sitting down in front of me. We taught children what to do and children only listened to us with silence. Now we have learned to respect children’s interests and thoughts and we should encourage the children to do things they like to do. As we were using the new teaching method, I felt children were out of control during the first month. I was

torn and struggling between the new and old ways of teaching all the time. (最困难的是建立孩子的常规。这些孩子是我原来教过的。原来他们坐下来就不让他们动的，我用我的威严让他们保持安静。现在我们学到要尊重孩子的兴趣和想法，我们老师应该鼓励孩子他们喜欢做的事情。当我们在尝试新的教学方法时，在第一个月我感觉孩子们难以控制，我在矛盾中挣扎着。)

(Interview, June, 2006)

Participants 8 and 1 focused more on classroom control and expressed their frustration in losing the control and order when they tried the new way of teaching. They used the words “agitated, depressed, struggle” to describe their emotional distress and resistance to adapting to a new way of teaching.

Being a “play partner” with the children is an element of child-centered practice. Switching from the role of an authority figure to a play partner was not easy for this group of teachers as well. Participant 18 described her struggle: “I struggled with the idea of playing with children at beginning. I was ashamed to crawl on the floor with children, thinking I was a teacher who should be the authority, not the play partner” (“我对自己要成为孩子的玩伴感到很矛盾，认为自己是老师，是权威，不好意思和孩子们一起在地上爬，做角色游戏”) (Interview, June, 2006).

All of the teachers suffered different levels of setbacks in adapting to the new teaching approach during the early days of the program. This caused them a high level of emotional distress when dealing with behavioral disorders, struggles to maintain order in classrooms, difficulties in team communications, and conflicts between the old and new

teaching practices. They felt frustrated, depressed, feelings of failure, anxiety, fear of not being able to do well, and worry.

The path from order to disorder and then back to order in the classroom reflected the transformation of the teachers' worldviews, their beliefs, and their behaviors. The participants began to redefine order in the classroom as active involvement and engagement of the children, not obedience and silence. Six months later, the research assistants visited the program. During the field observation, one of the research assistants wrote:

June 6, 06: Today, the activity in one of the classes caught my attention. This activity was to learn about the vegetables. When teachers brought different vegetables out, children got excited and there was a disturbance in the class. Most children left their seats and came to touch the vegetables. The teachers seemed to get nervous trying to calm the children down to keep the order. Children still were excited and talked about the vegetable each of them got: "Look, mine is round," "Mine is long." "Yours is red and mine is purple. Teacher, what is this one called?" Instead of having children to go back to their seats, the three teachers took all the vegetables out and divided them into two piles. Children then formed two groups by themselves and the teachers separated themselves to join these two groups. The teacher in each group actively engaged with the children to discuss about the vegetables. This lasted more than thirty minutes. None of the children was left out and all of them seemed deeply engaged in this form of discussion.

Then teachers asked all the children to go back to their own seats and had the children share what they discussed about the vegetables in front of the whole group. The activity ended successfully. (06 年 6 月 6 日，今天的一个班的活动吸引了我。这个活动是关于认识蔬菜的。这个班有三位老师，当老师把不同的蔬菜拿出来时，孩子们很兴奋，教室里一下子混乱了。大部分孩子离开了他们的座位过来拿蔬菜了。老师们看上去很紧张想要维持秩序，让孩子们安静下来，但是孩子们仍旧很兴奋，不停的在说他们各自手上的蔬菜：“老师，看，我的是紫颜色的”，“老师，我的是圆的”，“老师，我的是长的”，“你的是红的，我的是紫的。老师，这个叫什么？”三位老师马上决定拿出了所有的蔬菜，并将它们分成两堆。孩子们自发的组成两组。老师们也各自到了一个组合个组的孩子们讨论这些蔬菜。整个活动持续了三十多分钟，没有个孩子不参与的，所有的孩子似乎都在津津有味的讨论着。然后，老师们让所有孩子回到自己的座位上，相互分享两组各自讨论的蔬菜。这个活动最后圆满结束。) (Field notes, June 6, 2006)

This observation vividly illustrates the new conception of order the participants had developed in six months time, a concept of order that was more child-centered and respectful of the child and that followed the child's interest. The second form of more child-centered order was to increase while the first form of order, or teacher-centered order, was to further delay the development of the children living the institution.

2. Opening up

When describing the changes in team relationships, none of the participants used the word “cooperation” (*peihe*) anymore in their interviews. Instead, the word “collaboration” (*xiezu*) was used more often when talking about the team effort and the changes in being open to communication. Participant 9, a teacher with twenty years experience in working with institutionalized children prior to working in the HTS program, shared her experience about the collaboration among teachers:

At the beginning, there was a lack of understanding in the collaborative work among teachers. We didn't know how to listen to others and were inefficient in productive work. It affected the relationships among us teachers. With the support from HTS, eventually we put the collaborative strategies learned at the training into practice: we let everyone to talk about her thoughts at the meeting and then we all were willing to take the other's perspectives to see whether the idea was better or not, then we made decisions together based on each other's perspectives. I feel much better now with my fellow teachers. We become very productive and constructive in planning and in discussions when we are able to collaborate with each other. I like our team work now. (在一开始，我们老师之间缺乏对团队协作的理解。我们不知道如何积极去倾听对方，工作总是没有什么效果，也影响到我们老师之间的关系。在基金会小姐妹管理老师的帮助下，我们开始尝试用积极的沟通方式：我们让每个人都说出自己的想法然后我们都愿意从对方角度去思考同一个问题，再来一起做决定。现在我感觉好多了。我们现

在的讨论和协作非常有效，我很喜欢我们现在的团队协作。” (Interview, June, 2006)

Participant 17 shared an experience that changed her old ways of thinking by opening up to others:

One day, I was brave enough to disagree with the ideas of one of the teachers at a planning meeting. She and I had a constructive argument and finally we negotiated to get a plan both of us liked. I was so happy afterward because I never was able to disagree with someone openly, but I broke my silence for the first time. I was so proud of myself. Now I enjoy sharing my thoughts openly with all my fellow teachers, old and young. (有一天，我第一次在会有勇气提出了我自己不同的看法。我和我不同意见的老师开展了一场有建设性的争论，之后，我们通过协商提出了一个双方都满意的计划。我后来对自己非常高兴因为我第一次提出了不同意见，我对自己很自豪。现在我经常和我的同事们，无论是年轻的还是年老的，都喜欢分享我的想法。) (Interview, June, 2006)

Having had successful experiences of opening up when communicating among participants, the participants began to gain insight into the importance of relationship-building with these children. They realized that opening up to children resulted in positive emotional relationships between the teachers and the children.

Crying was one of the most common situations the teachers experienced with the institutionalized children. Institutionalized children, who lacked language and emotional stimulations from their environment, resorted to crying to express their emotional and

physical distresses; crying became their primary coping skill. Learning to acknowledge and then to recognize the individual needs of crying children promoted bonding between the participants and the children. Listening with compassion to the children's crying helped the teachers become closer to the children emotionally. Participant 19 shared her story about learning to address the crying of young children:

At first I didn't know what to do with the crying from different children. The crying really made me anxious and nervous, sometimes frustrated at the beginning. I didn't do well in handling the crying of children so I had difficulty in building relationships with them. As I learned to listen to children's' crying and started to think about why they cried, I began to get closer with children. I found when I was able to understand the needs behind the crying, the relationships between children and me were established. Eventually I become calm and was able to give comfort to the children without being anxious any more. I felt successful of myself for the first time after about two months struggling to build relationship with children. (一开始, 我不知道该如何对待孩子的哭闹。孩子的哭闹让我感到焦虑和烦躁。我在开始无法接近孩子。当我开始学会倾听孩子的哭声, 开始理解他们的不同哭声时, 我开始走进他们了。慢慢的, 我在安慰孩子时的心态变得平静, 不再焦虑。两个月之后我有了第一次与孩子建立感情的成功经历。) (Interview, June, 2006)

Participant 12 shared her experience of dealing with a crying child and the bond that formed between them:

At the beginning I felt it was very difficult to be close with Bei-Ping because he cried a lot and refused for people to be near him. I kept being near him and gave him gentle touches little by little everyday. When he stopped crying, I gave him hugs and held him as long as he wanted. Eventually he accepted me and stopped crying at school. One day he said, 'thank you,' to me for the first time. At that moment, I realized how happy I was. He became a happy child and is very active at school. My persistence and patience had paid off. (一开始我觉得很难接近白平，因为他总是哭得很厉害，不愿意任何人接近他。我每天坚持在他的旁边抚摸他。当他不哭时，我会一直拥抱他只到他不愿意为止。渐渐的，他开始接受我了，在学校里也不哭闹了。一天，他第一次主动和我说：谢谢。我真是太高兴了。他现在是一位快乐的孩子，很活跃。我的耐心和坚持得到了回报。) (Interview, June, 2006)

The participants, especially those teachers from inside the institution, talked about the changes they made in building a relationship with the children, and these changes have helped them develop a better and deeper understanding of the institutionalized children. Participant 2, the oldest teacher and one who has worked at the institution for over 25 years, bravely shared her experience of changing from a controlling person to a nurturing, maternal type of teacher for these children:

I changed my attitude toward children. Before, I never had paid attention to the feelings of the children and always used an authoritarian tone of voice when talking to them. The children were afraid of me and would be quiet when seeing

me. Now I used a nurturing and gentle voice with children. I smiled a lot at them and gave lots of hugs and touches to them. They were not scared of me anymore, instead, they would greet me loudly when they see me coming. (我改变了对孩子的看法。以前我不会注意到孩子的情绪，总是用严肃权威的语调和孩子说话。孩子们都怕我，看到我时都会保持安静。现在我和孩子说话时，都是和蔼可亲的，对孩子们总是微笑的，喜欢拥抱和抚摸他们。他们不怕我了，反而看到我时会大声地和我打招呼。) (Interview, June, 2006)

The older teachers like Participant 2 discovered a more mothering role as teacher for these children in contrast to their strict authoritarian role before.

Many other participants described how seeing the first smiles and the initial changes in the children strengthened the relationship between the teacher and the children. These promising moments helped the teachers develop a strong passion for these children that enabled a transformation to happen both in teachers and children. Participant 20 describes the experience as this:

The more and more frequent beautiful smiles from children definitely keep me attached to my work. It also reflected on my work with children. I become less critical of children and more appreciative of children's ordinary moments. My feelings toward the children grew stronger overtime. When it's time for me to go home, I see the children standing by their window and waiting for saying goodbye to me. Sometimes they would wait for half an hour just for saying goodbye to me.

I feel both children and I are attached to each other now. (当看到孩子们越来越多的灿烂笑容，我越来越喜欢我的工作，也越来越舍不得他们了，对他们不再挑毛病，而是欣赏他们每一个平常时刻。当我们回家时，孩子们会趴在窗户上等着我们就为了对我们说再见。我感觉我和孩子们的感情是越来越深厚了。) (Interview, June, 2006)

Participant 14 explained that her experience in developing an attached relationship with a child has changed the child and has helped her become a better teacher:

When I started to see the child first smiling, first making eye contact with me, first reaching out for playing...I got more and more excited toward the child. I became to be attached to the child, and began to think of her more and more when I was off the work. It might be that I felt my efforts paid off. These were my first successful experiences after weeks of non-responsiveness from the child. When I saw the child run to me and greet me loudly for the first time, “Teacher Fan! Teacher Fan!,” my heart warmed up. I was so relieved that my daily nurturing touches, warm hugs, gentle voices, and playing with her opened her up. I never had showed such long persistence and patience until I became a HTS teacher. I definitely believe in forming a secure relationship with a child can transform a child and myself. (当我看到了孩子第一次笑容，第一次和我的眼神交流，第一次伸出手拿玩具等，我对孩子的激情就更深。我开始留恋这个孩子

了，下班后也开始惦记着个孩子了，这也许是我的努力终于得到回报了吧。

当我看到这个孩子看见我时大声对我说：樊老师好时，我感到很温暖。我每天的温柔抚摸和拥抱，柔和的语调，和她一起玩耍的付出使她终于打开的心扉。我原来从来不会有这样的坚持和耐心的。我现在坚信与孩子建立安全的亲子依恋情能彻底改变一个孩子和我自己。) (Interview, June, 2006)

Participant 17 stated that the image of the child's role she had before this experience was a more traditional view: that the child was to be a passive follower of adults' directions. After becoming an HTS teacher, she re-examined this traditional image of children and realized that the image of children she has now is more child-centered:

I used to think a child drawing on a wall meant a wrongdoing by the child. He should draw on paper instead. Now I learned to take the perspective of a child and to understand the incident of a child drawing on a wall. I would think about whether he might be wanting to feel how drawing on a wall is different from drawing on paper. So instead of getting angry about drawing on the wall, I would get excited and enjoy the way he is exploring. (我原来认为孩子把画画在墙上是错误的行为，因该帮她纠正过来在纸上画。现在我能从孩子的角度来看待这事。我会认为他其实是想知道在纸上画和在墙上画有什么不一样。所以，我不会再感到生气，而是会为孩子的想法感到高兴并欣赏他的探索行为。)

(Interview, June, 2006)

Participant 18, who felt she lost her authority by playing with the children and crawling on the floor, shared her excitement in overcoming her traditional view about the role of a teacher. She bravely challenged herself and opened up to the children to become more child centered in her approach to teaching: “I opened myself to children and paid more attention to how the children played. Then I would think of many fun and rich ways to play with them. I found myself changed in the role of a teacher.”

After overcoming the struggle of becoming a playing partner with the children, Participant 18 became more energetic and passionate when working with them. She has become a keen observer of the children and is carefully integrating her observations with her daily interactions with the children to provide a nurturing and stimulating learning environment for these children. The research assistant’s field notes from June 6, 2006 note:

Participant 18 is playing with a small group of children in front of a mirror in the classroom. She put a stuffed monkey on her shoulder following a child’s play smiling and is telling other children she is carrying a monkey just like that child on the shoulder crawling (a way to stimulate children ‘s language while playing). Other children came to join her and the child’s play using dolls or other stuffed animals. (张正在教室里的镜子前与一小群孩子在玩。她学着一个孩子把一个娃娃猴放到她的肩上，微笑着告诉其他小朋友她正在学着某某小朋友在背一个娃娃猴在地上爬，) (Field notes, June 6 2006)

The field notes described Participant 18 and her relationship with the children with whom she worked at the sixth month of the program operation. She appears to have developed skills in being responsive to individual children's needs which she has incorporated into her teaching through her play with the children.

As the shift from traditional to new teaching practices progressed, the emotions of the participants were also changing into more positive, enthusiastic, and passionate attitudes toward their work. All of them expressed that they felt more positive about themselves at the sixth month compared to the first month of their teaching experience. The following expressions were described by some of the participants at the sixth month mark:

Participant 13: "When I observed a child who hadn't changed in three months responding for the first time in the discussion, it brought me a big surprise and sense of excitement. When I had more surprises like this from children, I felt happier and got more and more excited at work" ("我观察的一个孩子在头三个月里的讨论中一点都没有反应，终于有了第一次的发言，这带给我了无限的惊喜。当我有越来越多类似的惊喜时，我对我的工作越来越感到快乐") (Interview, June 2006).

Participant 6: "I am still a little worried, but it is a different kind of worry than I had at the beginning. Before I was worried about not being able to do this work; now my worry is how to come up with an activity plan that is more of child-centered. I am much happier and more optimistic" ("我现在还是有点担心，不过现在的担心和原来的担

心不一样。原来是担心我能否胜任这份工作；现在是担心如何能更好的设计以孩子为中心的活动。我现在心情开朗了许多”) (Interview, June 2006).

Participant 2: “I feel better now because I have a closer relationship with these children than I had before the program. I am less critical and children are more willing to be with me. My feelings are more relaxed and joyful. I am very surprised at myself being so happy now” (“我现在感到好多了因为我和孩子们已经建立了很好的感情，这是在原来没有的。我现在很少用批评的眼光对待孩子，他们更愿意和我在一起。我感到放松多了更快乐了。我对自己现在的快乐感到很惊喜”) (Interview, June 2006).

Participant 9: “Seeing the changes in the same children I never saw before has made me more excited and successful. I really like this kind of feeling. I become more talkative at home telling the changes of the children to my husband and my daughter which I never did before I became a HTS teacher. My family was surprised seeing the changes in me” (“当看到同样的孩子有了这么多的变化使我感到更高兴和成功感。我很喜欢这样的感觉。我现在在家里更喜欢说话了，告诉我丈夫和女儿这些孩子的变化，这是在以前根本不会有的”) (Interview, June 2006).

It is evident that the participants gained important experiences that helped them overcome the difficulties and challenges they encountered during the early days. This enabled them to become more open to the new worldview about teaching and boosted their self confidence as well.

In their second self drawing after a year’s teaching practice in HTS program, the features in the drawings were more child-centered and cohesive between teachers and the

children. The drawings were also more individualized in thinking among the teachers. More teachers drew nature as a learning environment for children and emphasized play for young children's learning inquiry. There were many drawings that indicated nurturing relationships between teachers and children and emphasized the importance of promoting emotional competence in children. For example, one teacher explained in her drawing:

I drew myself and children together to search for a castle which was symbolic of children's curiosity and inquiry. The road of searching is zigzag shaped which means the complexity and many questions of the learning journey for both the children and the teachers. We are looking for the key to open the castle so that we can find answers by ourselves (Participant 18, January, 2007).

Another teacher described her drawing of her role as a teacher: "The boat is the children and the paddle is the teacher. The children are searching for inquiries in an endless journey like in an ocean while the paddle (the teachers) helps them to reach where the children want to reach" (Participant 14, January, 2007). One teacher drew two birds to represent the child and the teacher:

Sometimes, I explore the unknowns together with the child; sometimes, I am a mother to the child when she is hurt, sad, or scared; sometimes, I will let the child explore by herself while I am just watching her. In the future, I will let the child go to find her own world. (Participant 11, January, 2007)

Another teacher drew a harmonious relationship between a teacher and the children: “The moon is the teacher and the stars are the children. The relationship between moon and stars is equal and harmonious” (Participant 7, January, 2007).

The teachers’ post-measure drawings reveal a fundamental change in their perceptions of the teacher-child relationship after a year’s teaching practice with HTS curriculum. The teachers have switched their paradigm of hierarchal teacher-child relationship to a child-centered progressive worldview.

3. Self confidence

An increase in self-confidence seemed to be an important outcome described by the participants when discussing their experiences in overcoming the difficulties they faced with the new teaching practices. They realized that boosting self-confidence would not only greatly promote the learning desire both for adults and children, but would also develop a positive sense of loving self and others, especially for children living in institutions, who were more likely to lack self confidence, felt worthless, and felt hopelessness regarding their own futures.

Participant 13 was a young female raised at an institution. She examined deeply the issue of her own low self-confidence and its negative impact on her self-concept and her social and emotional development. She recalled past experiences when she believed she was neither important nor special:

As I was growing up, I thought I was not capable of doing things and I never felt I was good, important, or special. I didn’t know what love really meant for me. I

didn't like the feelings of being pitied by other people. It made me feel I was not as worthy and as capable as others. But meanwhile I seemed to expect other people to show their sympathy for me as if I was a helpless person who needed to be helped all the time. When I didn't get the help I needed, I would become angry at other people. Building self-confidence and learning to love myself are my biggest gains since I became a HTS teacher. Now I have realized that to help institutionalized children is to instill self-confidence in these children that they are capable of learning and doing anything. They need to believe in themselves that they are special and important just like any human being on earth. (“在我成长时候，我总是觉得自己不能干，不够好，不重要。我并不理解什么是真正的爱的含义。我不喜欢别人可怜我，它让我感到我不如别人。但是在同时，我又希望别人对我同情似乎我是一个总是无助的人。如果我得不到别人的帮助，我会对别人生气。成为基金会的老师后，我收效最大的就是建立自信和学会爱自己。现在我可以真正理解要帮助福利院的儿童建立自信，相信自己是重要的，就象在地球上和其他所有人一样”) (Interview, June, 2006).

The experience described by Participant 13 validates attachment theory, that is, that a lack of secure attachment in early years affects relationship-building in adult life. Participant 13's experience as a HTS teacher helped her not only to identify the needs of the institutionalized children in a special way, but also to develop a better understanding of herself. She took the courage to boost self-confidence for a new life and to learn to love and believe in herself.

Success in building relationships with children has led the participants to discover potential in themselves as well as the children. This discovery boosted the self-confidence in the participants. They developed a sense of pride in transforming the children into happy and active learners. The sense of pride encouraged the participants to believe in themselves and to believe that they were competent in the new teaching approaches and were capable of providing effective teaching strategies to help the children. It enabled the participants to become more passionate about meeting the children's unique developmental needs. The following are descriptions by some of the participants about their experience of a greater sense of self-confidence which strengthened their positive work attitude.

Participant 19: "I felt confidence in myself because I am able to recognize my strength, which makes me very proud and happy; I used to feel happy for myself when I was praised by others, but now I can recognize my potentials and my success in my work. The feeling of happiness comes from within myself" ("我觉得我对自己有自信了因为我自我肯定，这使我感到自豪和快乐；以前我是得到别人的表扬才感到快乐，现在在我能够认可自己的潜力和成功。这是来自于自身的快乐，是自己找到的") (Interview, June 2006).

Participant 16: "After a while, when I saw more changes in children, it boosted my confidence in my work with these children. I felt much at ease and eager to go to

work everyday” (“当看到孩子的变化后，使我对自己的自信增加了。我觉得我放松了很多，更殷切的盼望着每天的工作”) (Interview, June 2006).

Participant 4: “Now I become calmer and less worried. I have more confidence in seeing changes in children” (“现在我自己更冷静了不再焦虑了。看到孩子们的变化我有了更多的自信”) (Interview, June, 2006).

As the participants continued to strengthen their confidence in themselves and their work, their passion for the institutionalized children grew stronger. They became more sensitive and responsive to individual children and sought to build attached relationships with each of them.

While self-confidence was boosted in most participants, a few seemed to struggle in building their confidence in working with the children. Participant 11, a young female from the northern part of China (where they speak a different dialect), shared her frustration with children’s behaviors and her confusion with the new teaching practices. She seemed to focus more on external control as a way for a teacher to guide a child with difficult behaviors. Her lack of effective and developmental guidance understanding kept her from building close relationships with the children. When she was asked to share a teaching experience that she was proud of, she said that in using a natural consequence strategy as the disciplinary action when a child broke a toy became a learning moment for her: “I told him he couldn’t play anymore and sent him out of the room. But I realized now that I could do better. I could ask the child why he broke the toy first.” (“我告诉他

不能再玩了，让他到屋外去。但是我现在觉得可以做得更好。我可以先问这个孩子他为什么要把玩具搞坏”) (Interview, June, 2006). It seemed that Participant 11 did not quite understand the difference between positive guidance and punishment when focusing on a child with a behavior problem. She complained of the difficulty in communicating with children whose dialect was different from hers and said that she felt language distanced her from the children: “I was worried and anxious for not being able to speak the dialect with the children. I tried to talk to the children about what they should do and shouldn’t do. But children couldn’t understand me” (“我对自己不能和孩子说方言感到很急很焦虑，我就没法和他们讲道理”) (Interview, June, 2006). Participant 11 seemed to place stress on the language differences as the communication issue rather than to reflect on her own teaching behaviors. She wasn’t confident enough in herself when working with the children.

The research assistant observed that this participant kept her distance from the children and was not engaging actively with the children at the sixth month mark:

Morning outdoor activity time, June 6, 2006: Children are playing with the balls near the classroom. Participant 11 is telling the children how to play the ball as a as an outsider without allowing herself to play in playing with the children:

“Child A, kick the ball to Child B; Child B, kick the ball back to Child A.” (2006年6月6日，早上户外时间：孩子们在教室附近踢球。任站在一边没有参与踢球，正在告诉孩子：‘某某，把球踢给某某；某某，把球踢回给某某’)

(Field notes, June 2006)

Those still struggling to make progress in their new teaching practice partially disconfirmed the hypothesis that all the participants would show a paradigm shift in their teaching after a year in the program. Overall, the teachers from the inside the institution experienced more emotional distress and were more resistant to the changes than the teachers from the outside the institution.

4. Reflection

Becoming reflective was frequently mentioned by participants as an important change in their teaching practices. Many of them described themselves as more willing to examine multiple perspectives when faced with a problem or a difficult or new situation. This practice enabled the teachers to be more tolerant of uncertainty and ambiguity in teaching situations. Some participants explained they used to have a simple view of their subjective thinking. Their oversimplified way of thinking made it difficult to understand themselves and their own actions in relation to others. Being reflective helped the teachers become more enthusiastic in their work because it strengthened their professional relationships and teamwork among the teachers. Reflection also engaged the participants in developing their professional competencies and inquiries for success. Learning to reflect broadened their perspectives and benefited their personal lives as well. Both Participant 16 and Participant 20 shared their experiences about learning to be reflective and how it has affected both their professional and personal growth:

I definitely think I have changed my thinking style now. I used to be a simple thinker -- either black or white, believing one problem has one solution, just that simple. Now I become a multiple perspectives thinker. I tend to look at a problem in many ways, from different angles, multiple layers when considering this problem, which has enhanced my problem solving abilities and boosted self-confidence. It has helped me learn to appreciate other people's thoughts and to work constructively with others, and in return, I have more people willing to work with me. I feel I am quite attractive and have a sense of fulfillment. It keeps me more energetic and I have begun to looking forward to the next day's work. (我绝对认为我已经改变了我的思维方式。我原来考虑问题很简单，不是对就是错，一个问题就一个解决的办法。现在我是多维性思维，会从不同角度，多方面的，立体化的来考虑问题，这帮助我对他人的想法更具建设性，更以欣赏的态度去对待，这样，反过来，我有更多的人愿意和我一起工作。我觉得自己现在挺有魅力，挺有成就感的。我现在变得对工作更有激情每天都想往工作。) (Interview, June 2006)

Participant 16 noted:

I noticed my pattern of thinking changed from a vertical one to a spiraling cycle. I used to think simply straight forward to get the answer and would easily give up if I couldn't find or wouldn't be given the answer because I was so afraid of failure. Now I like to think back and to reflect what I have experienced. When I revisit my experience, I always have new discovery of myself and of new thoughts. This

makes me excited and it brings me a good feeling about myself. I feel successful and am able to take the meaning of failure in a new perspective-actually I see it as a success also because it leads me to have more discoveries. I like the feeling of exploring. (我注意到我的思维方式已经从原来的直线型变成螺旋型思维了。我原先是简单的思考者，总想直接得到答案，如果找不到我会很容易放弃，因为我害怕自己的失败。现在我喜欢回想和反思我的经历。当我回想时，我总是会对我自己有新发现和新的想法。这些经历使我感到兴奋，自我感觉很好。我觉得能用新的角度来看待失败挺有成功感的——实际上我认为能从失败中找到新的发现其实是一种真正意义上的成功。我喜欢这样的探索。)

(Interview, June 2006)

Some teachers seemed to be more willing to tolerate ambiguity and be less anxious in uncertain situations than others. The research assistant wrote her observation at the sixth month of the program operation:

11:05am, June 6, 2006

The teachers of two different classes are having a discussion.

Li (Participant 12): “Now our children are much younger, we need to brainstorm activities that are different from the older children.”

Fan (Participant 10): “I don’t know what kinds of activities we should have.”

Li (Participant 12): “You can try something we are doing such as building relationship games and plays, learning about small animals, etc.”

Fan (Participant 10): “But our children are just new comers and they often don’t even walk by themselves. And sometimes they would throw their temper for no reason.”

Li (Participant 12): “I can tell you are frustrated. Please don’t worry. It happened to us at the beginning. There are many ways we can think of for activities. If one doesn’t work, you will find another one that may work. If you keep reminding yourself when the relationship is established, things will get much better.” (11 点 05 分 , 上午课后讨论 , 200 年 6 月 6 日 : 黎 : 现在我们班级的孩子普遍年龄比较小 , 活动开展不能像大班一样。樊 : 不知道开展什么活动好。黎 : 其实你们班级也可以开展跟我们类似的活动的 , 什么建立亲子依恋情 , 看看小动物等等。樊 : 但是我们孩子刚进来 , 走路经常赖在地上不走 , 经常无缘无故发脾气。黎 : 我觉得你有点焦虑了 , 不要急。刚开始的时候都是这样子的 , 我们孩子也是这样 , 慢慢就好了。你可以放开想各种活动 , 一个不行 , 可以是另一个 , 也许就可以了。如果提醒自己只要亲子依恋情建立起来了 , 情况一定会好起来的。) (Field Notes, June, 2006)

Both teachers were eager to plan child-centered activities after six months in the program. However, Participant 10 seemed to be more worried about her lack of ideas while Participant 12 seemed to be more at ease and open in communicating about uncertain activities with Participant 10. Interestingly, Participant 10 was hired from within the institution while Participant 12 was hired from outside of the institution; Participant 10’s continued worry may be related to her adaptation to new teaching practices.

Others also became more motivated in self-learning both for professional and personal growth. By openly communicating with the other teachers, they became more reflective in their own teaching when others shared their thoughts and practices. Therefore, the teachers were motivated to continue improving their own professional skills. Participant 9 discussed her changes in thinking:

I was a teacher in the institution for about ten years and our teaching job was to keep children safe. I never had to use my brain for children's activities and their development, neither for my own professional growth. Now with the new approach curriculum, I become an active thinker and like to ask myself how we can promote children's happiness in learning and how to enrich their learning lives. As I become more competent in thinking these questions, I found myself to not feel the stress or pressure, instead, I developed a strong learning desire to explore the unknowns, which I would never had before. (我在院里当老师已有十年了，我们主要的任务就是保证孩子的安全，不要出事。我从来不必动脑去考虑孩子的活动和他们的发展特点，也对我的专业提高无所谓。现在用这样的教学法，我成为了积极的思考者，喜欢对自己问问题如何能使孩子们在学习中快乐起来，如何丰富他们的学习生活。当我发觉自己在思考方面的能力有了提高时，我觉得我非但不感到有压力，反而养成了我一个想不断学习的欲望，这是我从来没有过的感觉。) (Interview, June, 2006)

5. Personal relationships

As the process of overcoming the obstacles and conflicts continued to unfold and progress, the changes have been dramatic in both the teachers and the children. The changes are multiple, layered, interconnected, and interactive which bring new changes in the teachers' professional and personal transformations. Twelve participants are mothers, and all reported that they noticed changes in their own parenting practices with their children. Chinese parenting is characterized similarly to Chinese teaching practices emphasizing adult control, obedience of children, and interdependence of the parent-child relationship (Zhao & Edwards, 2003; Quoss & Zhao, 1995). The participants who are parents described changes in their relationships with their children and were more democratic, open, and respectful of their children's perspectives.

Participant 3 shared her story to illustrate the dramatic changes in her son's view about her. She described that the relationship between her ten year old son and herself was tense and hierarchical. She was controlling at home and was very critical of her son and expected him to always follow her ideas:

I used to be a very controlling person at home. I was very critical of my son and liked to tell him what he should do without considering his feelings. My son didn't like to spend time with me and was afraid of me. My son never expressed his feelings to me. When I was away from home for a few days, he said he felt relieved. When I asked him whether he missed me or not, he said no. Since I became a HTS teacher, I began to respect my son's ideas and let him make decisions; when there is a disagreement, I would discuss it with my son instead of

forcing him to follow my decisions. I noticed that my son liked to be with me more and more now. About one week ago I went out of town again. When I called and asked my son whether he missed me or not, he told me that he missed me a lot and asked me to come home as early as possible! I was so excited to hear that he missed me! (我原来在家是控制欲很强的人。我对我儿子很严格，总是要他按我的要求去做，也不考虑他的情绪。我儿子不喜欢和我呆在一起，对我有一种惧怕。当我出差在外，他说他是一种解放。当我问他是否想我时，他说不想我。自从我成了半边天小姐妹老师后，我开始尊重我儿子的想法，而不是强迫他服从我的决定。我注意到我儿子越来越喜欢和我在一起。大约一周之前，我又出差了。当我给他打电话问他是否想我时，他说想，还问我什么时候回家，要我早点回家。我听到我儿子说想我，非常兴奋！)

(Interview, June, 2006)

Other participants shared similar stories to indicate better parent-child relationships at home that were associated with their HTS teaching practices. For example, Participants 14, 18, and 10 compared their parent-child relationships before and after the program. They said that their children noticed changes in their parenting behaviors, behaviors that were more respectful of their children's thoughts and feelings. The participants recognized themselves that they were more willing to listen to their children rather than rushing to make judgment.

Many participants expressed excitement that the improvement in reflective thinking skills and in the practice of open communication resulted in better interpersonal

skills with the people around them. In turn, these interpersonal skills resulted in an improvement in the quality of their daily lives. Participant 20's description of her change in this aspect is representative of many other participants:

I feel the change of my thinking ability not only has impacted my work, but also my personal life. It makes my life more exciting than before. I used to be "Ms. Always Right." I liked to be right and always wanted others to follow my ideas and to listen to me. I was not happy then because I didn't have many friends. After being a HTS teacher, I learned to be reflective and take the perspectives of others before rushing to make a subjective judgment. I discovered I was happier when I am able to listen to others and take others' perspective into my views. I become more sensitive to the needs of others. More people are willing to spend time with me now. (我觉得我思维能力的改变不但影响到了我的工作，还影响到了我的个人生活，使我的生活更多姿多彩。我曾经是“总有理”。我喜欢自己是对的，总是要别人听我的。因此我过得并不好，没有许多朋友。自从成了小姐妹项目老师后，我学会了反思和站在别人的角度来思考问题，而不是急于下主观的判断。我发现当我在努力的站在别人角度想问题时，我快乐了。我对别人的想法和需求更在乎了。许多人都愿意和我在一起了。)

(Interview, June, 2006)

In sum, as the process of adaptation was shifting to include more of the new approach, the participants experienced more positive emotions while enhancing and strengthening their skills in working with the institutionalized children. They also noticed

these same changes in their personal skills in their quests for self-improvement. However, when comparing the teacher, participants hired from within the institution and the teachers hired from outside the institution, the teachers from inside the institution went through a more difficult time in adjusting to the new teaching practice than the other group of teacher-participants. They also expressed higher levels of distress and more struggles in dealing with feelings of loss and self-denial and disconfirmation of what they did as teachers prior to the HTS program teaching practice. On the other hand, the teachers hired from outside of the institution had an easier time in boosting their self-confidence and were more willing to open up when experiencing the setbacks during the early days.

Chapter 5

QUANTITATIVE RESULTS

In order to examine whether changes in teachers' perceptions of teaching and learning have occurred, and if so, what those changes are, among these twenty teachers who participated in this study after one year in the Half the Sky program, several analytical techniques were employed to describe the quantitative data and test the hypotheses.

Intercorrelations of the measures on Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs

First, the intercorrelations of the three pre-test and post-test measures (Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs) were calculated to examine the interrelationship between the variables at the two time points. Table 5.1 shows the intercorrelations. The results indicated that although there were no significant intercorrelations among the three measures at the time of the pre-test, the pre-test on Teacher Efficacy was positively correlated to the post-test on Constructivist Beliefs ($r = .575, p \leq .001$), indicating that higher levels on the pre-test for Teacher Efficacy were related to higher levels on the post-test for Constructivist Beliefs for the total participants. The results also revealed a positive correlation between the pre-test on Constructivist Beliefs and the post-test on Teacher Efficacy ($r = .489, p \leq .05$), suggesting that higher levels on the pre-test for Constructivist Beliefs were related to higher levels on the post-test on Teacher Efficacy. Furthermore, there was a positive correlation between the pre-test and post-test on Tolerance of Ambiguity ($r = .486, p \leq .05$), indicating that higher levels of tolerance for ambiguity at the first time point were associated with the higher levels of tolerance of ambiguity at the second time point. At the time of the post-test, Teacher Efficacy was positively and significantly correlated with Tolerance of Ambiguity and Constructivist Beliefs, $r = .491, r = .479, p \leq .05$ level of significance, respectively.

Table 5.1: *Intercorrelations of pre-test and post-test scores for Teacher Efficacy, Tolerance Ambiguity, and Constructivist Beliefs for the total sample of teachers (n = 20)*

	TE(1)	TA(1)	CB(1)	TE(2)	TA(2)	CB(2)
TE(1)	-	0.19	0.192	0.218	-0.008	0.575**

TA(1)	-	0.038	-0.21	0.486*	-0.118
CB(1)		-	0.489*	0.196	0.274
TE(2)			-	0.491*	0.479*
TA(2)				-	0.431
CB(2)					-

* $p \leq .05$; ** $p \leq .01$

TE (1): Pre-test of Teacher Efficacy

TA (1): Pre-test of Tolerance of Ambiguity

CB (1): Pre-test of Constructivist Beliefs

TE (2): Post-test of Teacher Efficacy

TA (2): Post-test of Tolerance of Ambiguity

CB (2): Post-test of Constructivist Beliefs

The positive significant correlations between Teacher Efficacy and Tolerance of Ambiguity and Teacher Efficacy and Constructivist Beliefs indicated that higher levels of Teacher Efficacy were related to higher levels of Tolerance of Ambiguity as well as to higher levels of Constructivist Beliefs in the post-test.

Tests of Hypotheses

(1) Teacher efficacy measures the teacher's beliefs of teaching effectively with children (Bandura, 1997; Lin & Gorrell, 2001). Hypothesis 1 stated that there would be an increase in teacher efficacy reported by the teachers from pre-test to post-test. A repeated measure t-test was performed, and the results are provided in Table 5.2. The t value was 2.303, $p(19) = .003 (<.01)$, and the null hypothesis was rejected, suggesting that the hypothesis 1 was confirmed. The teachers increased significantly in their teacher efficacy level in their post-test.

Examining the findings more closely indicates that Participants 1, 2, 7, 8, 10, and 11 decreased in Teacher Efficacy over time while the other participants increased.

Among those six who decreased their teacher efficacy after one year in the program, five teachers were from inside of the institution (see Appendix 7).

The means of the pre-tests and post-tests on each item were also calculated to determine which efficacy item(s) showed change over the two periods of time. Out of the total 20 items, items 2 (*I can successfully guide even the most difficult children*), 4 (*Gifted children and their parents can be intimidating to teachers*), 15 (*I have the ability to positively negotiate differences with parents and children from different ethnic, economic, and cultural backgrounds*), and 19 (*Even a teacher with good teaching abilities may not reach many children*) showed a decrease in mean scores over time while items 7 (*If children do not receive guidance at home, they aren't likely to accept any guidance*) and 13 (*If parents would do more with their children, I could do more*) showed the largest increases over time (see Appendix 8). Items 2, 4, and 9 measure personal confidence in working with difficult children and their families. The result indicates that the participants had difficulty believing in themselves in dealing with difficult children and offering culturally appropriate learning experiences. However, when considering the background of the educational setting for this group of teachers, items 2, 4, and 15 were not relevant to the institutionalized children with whom they worked; therefore the results may not be valid to reflect the participants' perceptions in their teacher efficacy levels. The decrease in item 19 indicates that the participants decreased their confidence in

teaching. This decrease may reflect the participants' expectations of support from each other and the whole community when teaching these special needs children living in the institution. On the other hand, items 7 and 13, which showed the largest increase in the post-test, may indicate that the participants became more confident in their general teaching abilities after a year teaching in the HTS program.

(2) Tolerance for Ambiguity measures a person's capacity to endure uncertainty in teaching-related decisions made in ambiguous situations. The capacity is closely related to levels of reflective thinking and teaching practice (Budner, 1962; Furnham & Ribchester, 1995; McLain, 1993; Yurtsever, 2000). Hypothesis 2 stated that there would be an increase in tolerance for ambiguity reported by the teachers from pre-test to post-test. A repeated measure t-test was performed and the results are provided in Table 5. 2. The t-test revealed a significant change over time from pre-test to post-test, with $t = 2.168$, $p(19) = .043 (<.05)$, and the null hypothesis was rejected, indicating the hypothesis 2 was confirmed that the teachers in this study increased their levels in tolerance of ambiguity from the pre-test to the post-test time points.

Table 5.2

Descriptive results and t-test on the total scores of the three measures

Measures	N	Pre-test	Post-test	T-test
		Mean (SD)	Mean (SD)	

<i>Teacher Efficacy</i>				2.303**
Total participants	20	2.91 (.205)	3.05 (.220)	p(19)=.003<.01
Inside the institution	10	2.93 (.292)	2.98 (.190)	
Outside the institution	10	2.89 (.217)	3.12 (.239)	
<i>Tolerance of Ambiguity</i>				2.168**
Total participants	20	4.75 (.691)	5.10 (.740)	p(19)=.003<.01
Inside the institution	10	4.52 (.721)	4.60 (.647)	
Outside the institution	10	4.98 (.609)	5.61 (.413)	
<i>Constructivist Beliefs</i>				3.431**
Total participants	20	3.02 (.154)	3.18 (.196)	p(19)=.003<.01
Inside the institution	10	2.96 (.130)	3.16 (.202)	
Outside the institution	10	3.08 (.155)	3.21 (.196)	

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Examining the findings more closely indicates that while the majority of participants increased their tolerance of ambiguity over time, there were three participants who showed a decrease. They were Participants 1, 2, and 14. Among these three, two of them were from inside of the institution (see Appendix 7).

The means of the pre-tests and post-tests on each item were also calculated to determine which tolerance of ambiguity item(s) showed change over the two periods of time. Out of the total 22 items, 16 items showed an increase over time, while items 12 (*I enjoy tackling problems which are complex enough to be ambiguous*) and 19 (*I pursue problem situations which are so complex some people call them “mind boggling.”*) showed a decrease, and items 1, 7, 10, and 14 remained the same (see Appendix 9). Both

item 12 and 19 measure whether the participants have a high level of tolerance in dealing with complex problematic situations. According to the interviews from the participants, there were many complex situations the participants had never encountered before during their teaching experience at the HTS program. The decrease on these two items may suggest that after working at the HTS innovative program for a year, the participants realized that it was harder than what the participants originally anticipated about a situation that was complex enough to be ambiguous, and thus decreased their levels in tolerance of dealing with a complex and ambiguous situation.

(3) Constructivist Beliefs is a new measure of the teacher's beliefs about best practices for young children's learning, and beliefs in professional standards of developmentally appropriate practices such as reflective competence in teaching and learning (Smith, 1997; Vartuli, 1999). Hypothesis 3 stated that there would be an increase in Constructivist Beliefs reported by the teachers from pre-test to post-test. A repeated measure t-test was performed and the results are presented in Table 5.2. The t-test revealed a significant change over time from pre-test to post-test, with $t = 3.431$, $p(19) = .003 (<.01)$, and the null hypothesis was rejected and the hypothesis 3 was confirmed, indicating the whole group of the teachers increased significantly in their constructivist beliefs in their post-test.

Examining the findings more closely indicates that all the participants moved toward a stronger constructivist approach except Participant 6, who was a teacher hired from inside the institution (see Appendix 7).

The means of the pre-tests and post-tests on each item were also calculated to determine which constructivism item(s) showed change over time. The findings revealed that out of a total of 18 items, 13 of the items showed an increase in mean scores over time, while items 3, 6, 8, 14, and 18 showed a decrease. Among these latter items showing a decrease, items 3, 8, 14, and 18 are associated with the factor of “individual constructivism,” while item 6 is linked to parent involvement. The largest changes were items 9 (*Children learn from finishing a series of simple procedures in order to make fewer mistakes*), 10 (*Adults observe and help each child based on his or her study goals*), and 11 (*Adults set up the study goals for children every school day; they should make plans to help children learning*), which had largest increases from pre-test to post-test (see Appendix 10). Item 9 and 11 are non-constructivist beliefs and are the items of using reversed codes. Apparently, the teachers made a significant shift from a non-constructivist view to beginning to take on constructivist perspectives after working at the HTS program for a year.

(4) Hypothesis 4 stated that teachers hired from inside the institution would have more difficulties than the teachers hired from outside when adapting the HTS program teaching practice. With respect to quantitative findings, the prediction was that the teachers from outside would show greater increase over time in Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs. This hypothesis was tested with a series of two-factor repeated measures ANOVAs to test the differences between the means for each of the three measures, with a within-subjects main effect of Time (Pre-

test versus Post-test) and between-groups main effect of PW (Prior working places: Within the Institution versus Outside the Institution). The results are provided in Table 5.3.

For Teacher Efficacy, the main effect for Time was significant, $F(1,18) = 5.666$, $p < .05$, but the main effect for PW and the interaction effect were not significant. The effect size for Time of partial Eta squared $\eta^2 = .239$, which indicated a small size effect that explains 58% of the variance, according to Cohen's benchmark (1988).

For Tolerance of Ambiguity, both main effects were significant. For Time, $F(1,18) = 5.243$, $p = .034 (<.05)$. However, the effect size of partial Eta squared $\eta^2 = .226$ was small, according to Cohen's Standard (1988). For the main effect of PW, furthermore, $F(1,18) = 10.706$, $p < .01$. The effect size of partial Eta squared $\eta^2 = .373$, which indicated a medium size effect that about 66% of the variance, can be explained according to Cohen's Standard (1988). The interaction effect was not significant. The findings yielded that the participants from outside the institution changed more rapidly on Tolerance of Ambiguity than did the participants from inside the institution.

For Constructivist Beliefs, the main effect for Time was significant, $F(1,18) = 11.497$, $p < .01$. The effect size of partial Eta squared $\eta^2 = .390$ is a medium size effect and indicates that 66% of the variance can be explained (Cohen, 1988). The main effect for PW and the interaction were not significant.

In sum, Hypothesis 4, teachers hired from outside the institution would show more change over time, was confirmed only for Tolerance of Ambiguity. However, the

lack of significant results on the other measures may have been due to the small sample size. In order to further examine the differences in changes in the participants from inside and outside the institution, a percentage change for each group from the pre-test to the post-test was calculated for the three measures. The results showed that for Teacher Efficacy, participants from outside the institution had a 7.8% change while participants from inside the institution had a 0.3% change. For Tolerance of Ambiguity, the participants from outside the institution gained 15%, while participants from inside the institution gained 1.8 %. For Constructivist Beliefs, the participants from outside the institution had a 9.3% increase while participants from inside the institution had a 9.8 % increase. Apparently, teachers hired from outside the institution changed more rapidly than the teachers from inside the institution in the measures of Teacher Efficacy and Tolerance of Ambiguity at the post-test. However, the teachers hired from inside the

Table 5.3

Analysis of variance comparisons of teachers hired from inside and outside the institution at two points of time on the measures of Teacher Efficacy, Tolerance of ambiguity, and Constructivist Beliefs

Measures	F value (1,18)	P	Partial Eta squared η^2
<i>Teacher Efficacy</i>			
main effect for Time	5.666	0.029*	0.239
main effect for PW (prior workplace)	0.394	0.538	0.021

PW by Time interaction	2.294	0.147	0.113
<i>Tolerance of Ambiguity</i>			
main effect for Time	5.243	0.034*	0.226
main effect for PW (prior workplace)	10.706	0.004**	0.373
PW by Time interaction	3.195	0.091	0.151
<i>Constructivist Beliefs</i>			
main effect for Time	11.497	0.003**	0.39
main effect for PW (prior workplace)	2.279	0.149	0.112
PW by Time interaction	0.558	0.465	0.03

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

institution increased their Constructivist Beliefs slightly higher than the teachers hired from outside the institution at the post-test. Figure 5.1 summarizes these results.

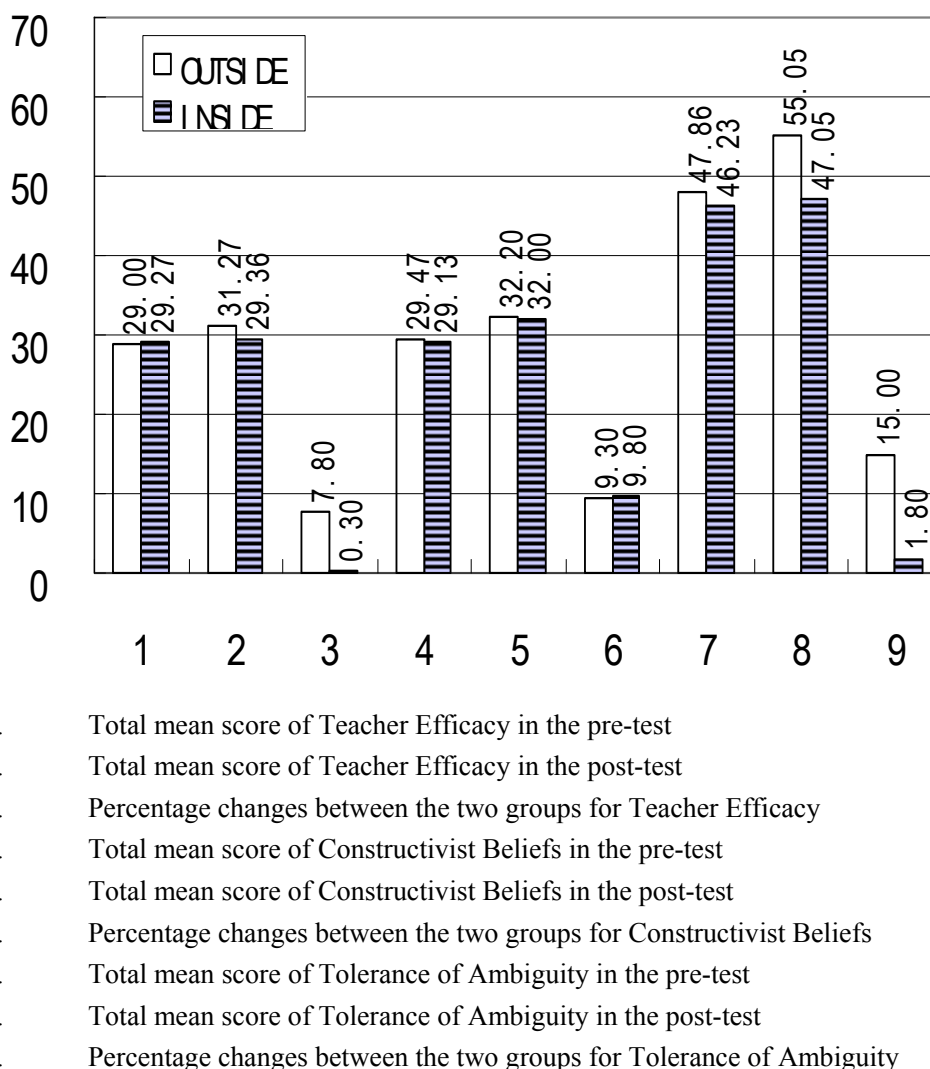


Figure 5.1: *The comparison of percentage changes in total mean scores between participants from inside and outside of the institution*

Summary

The results reported above show that there were changes by this group of participants over one year of time on all three measures of teacher perceptions. First, confirming Hypotheses 1, 2, and 3, the mean scores for all the three measures of Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs increased significantly from

pre-test to post-test. On the other hand, Hypothesis 4, that teachers hired from inside the institution would show more difficulty than teachers hired from outside when adapting to the HTS program teaching practice, was confirmed only for Tolerance of Ambiguity. This suggests that teachers from inside the institution had more difficulties in enhancing their level of Tolerance for Ambiguity in their teaching situations than the teachers from outside the institution, but not in their Constructivist beliefs and Teacher Efficacy.

Chapter 6

DISCUSSION

An overview of the study

This research was conducted in order to study a group of twenty Chinese teachers in their first year of teaching in an early childhood intervention program that combines Western and Chinese educational philosophies and pedagogies specifically for institutionalized children living in the Guangzhou Children Welfare Institution in China. This study was also intended to explore changes in the teachers' pedagogical beliefs, their reflective skills as a result of implementing the intervention program curriculum, and how they address cultural and pedagogical differences when putting their training into practice in the first year. A mixed methodology was applied to the study to help the investigator better understand the different aspects of this group of teachers' teaching and learning experiences and to examine a broad range of questions both qualitatively and quantitatively. This mixed methods study explores the following qualitative and quantitative research questions: 1) How do Chinese teachers describe and report their teaching practices in a combined Western-Chinese educational program after the first year of teaching? 2) How do Chinese teachers explain their adaptation to a Western paradigm of teaching and learning that affects both their professional growth and personal life?

This study was conducted in order to provide a formative discourse among educators and practitioners across cultures by paying close attention to what may happen in teaching and learning when teachers encounter approaches or methods that are foreign to them. The intention of this study was to benefit future studies in the cross-cultural teacher preparation field and to promote further dialogue among professionals in China and around the world regarding the professional well-being of teachers working during times of rapid social changes. Furthermore, the investigator hopes the findings in this study will help teachers ease their anxiety of using new ways of teaching and become better prepared in a rapidly changing world.

The qualitative data include personal interviews with the teachers at their sixth month of teaching, drawings of themselves that focus on the relationships between teacher and child, and field notes from research assistants at the beginning of the program and at the sixth month of program operation. The quantitative data involves self-report instruments that determine Teacher Efficacy, Tolerance of Ambiguity, and Constructivist Beliefs at two different time points, before the program and at the twelfth month of the program, to examine the outcomes of this group of teachers. The specific measures used included: Teacher Efficacy (Henson, 2001; Wheatley, 2002), Tolerance of Ambiguity (Budner, 1962; Furnham & Ribchester, 1995; McLain, 1993; Yurtsever, 2000), and Constructivist Beliefs (Smith, 1997; Vartuli, 1999).

The generation and analysis of data using self drawings from the participants, interviews with the participants, and field notes from the research assistants allowed the

investigator to do the following: (1) explore participants' perceptions of adapting to a new educational approach; (2) identify central themes associated with the participants' experiences; and, (3) make meaningful interpretations that take into account the background, culture, and situation of individuals. By combining qualitative data with quantitative data, the investigator was able to weave together the data collected from multiple research methods to examine components that may be influenced by the experience of adapting to new educational practices. The following sections highlight the factors and processes that contribute to the transformation of the teaching practices among the group of twenty teachers based on analysis of the qualitative and quantitative data results (Cresswell & Clark, 2007).

Open communication, collaboration, and competence in reflection

Opening up. All Half the Sky teachers must go through an intensive training workshop prior to their teaching in the Half the Sky intervention program. In order to provide a culturally- appropriate learning experience for the new HTS teachers and to become knowledgeable about the Reggio Emilia approach and progressive pedagogy of the United States, open communication and collaboration are important topics for discussions and practice among the teachers in both the training and follow-up professional development. The goal of the professional training and development is to help the participants develop an awareness of, and sensitivity to, others' thoughts and feelings as well to let each individual's voice be heard by encouraging each teacher to

speak her mind in order to co-construct inquiries. The experience of opening one's self up to others was one of the most difficult challenges for the participants at beginning. According to Pratt (1991), Chinese culture emphasizes societal roles, the supremacy of hierarchical relationships, compliance to authority, and the maintenance of stability; hence, inner emotions are of little significance in the construction of self within Chinese society. Therefore, individual feelings are irrelevant when making actions. As a result, Chinese do not like to state their personal opinions, but rather prefer to seek consensus (p. 301).

Being open when communicating with each other reflects a cultural practice of the West. How to effectively integrate this Western cultural approach into Chinese teachers' teaching context became one of the first practices at the training institute and on their first days teaching. When teachers tried to become sensitive to others' feelings and thoughts as well as shared their own thoughts, they sensed an extremely rewarding feeling of being respected and trusted as a result. As the teachers experienced new and exciting feelings in a reciprocal fashion among themselves, they began to feel good about themselves and others; therefore, an environment promoting a strong collaborative teamwork was established as a part of the supportive network among the teachers. When the teachers felt there was a strong support system and encouragement within their own learning community, they became stronger and were more courageous individually when facing challenges. The support from each other within the HTS community became a facilitating factor to overcome the challenges in their teaching practice when there were

conflicts in their modes of thoughts between Chinese and Western beliefs. As Participant 20 explained:

I am so grateful and lucky to work in this program because I feel I am being respected and trusted by my peers. When we have conflicts, we would allow each other to talk about our thoughts and listen to each other to find a resolution together. This working environment keeps me staying here. I don't want to go anywhere else. (我很感激也很幸运能在小姐妹项目里工作，因为我感受到一种被尊重被信任的感觉。当我们老师间有矛盾时，我们会让每位老师都说出自己的想法，倾听每位老师，共同想办法解决。这就是我一直坚持下来的原因。我现在不想去任何其他地方了。) (Interview, June 2006)

Cooperation and collaboration. Open communication leads to the issue of the cultural meanings behind cooperation and collaboration that also affected the adapting experience among these teachers. In Chinese society people are expected to follow the rules and to give up one's private self to the group, or the public self (Pratt, 1991), when necessary. This is called *peihe* (配合), a direct translation of "cooperation" in Chinese, which is a form of compromising and complying with one who is the superior, or, of giving up one's thoughts in order to fit in with others and find consensus (Pratt, 1991). "Collaboration," or "*xiezu* (协作)," in Chinese, requires individual's voices to be heard and involves a process of negotiation in sharing one another's thoughts and ideas in order to produce a new agreement. In the Reggio Emilia approach, collaboration is intended to provide children with various perspectives to challenge one another's views, while

providing opportunities for them to revisit, revise, and review their own theories and hypotheses as a form of negotiation to overcome obstacles (New, 1998). Social relationships in Chinese society translate “cooperation” as obedience to authority and power while collaboration is far less socialized through families and school systems in Chinese society. The cultural meaning of cooperation, therefore, may explain how some teachers from inside the institution felt frustrated at the beginning when they didn’t know how to work with younger teachers collaboratively, because they still expected the younger teachers to cooperate with them.

Being collaborative with one another became another challenge of open communication for the participants: How can collaboration take place between older teachers and younger teachers, between teachers from outside the institution and inside of the institution, between teachers and children, and among the children themselves? Multiple perspective-taking skills, active listening skills, and constructive learning skills gained by the teachers became additional facilitating factors in addressing and overcoming the cultural obstacle of avoiding conflicts when communicating with one another. The teachers used the inquiries of open communication in their teaching practices with the children.

Reflection. Learning to be reflective while communicating with others reduces the tension and anxiety of the teachers who are socialized to avoid conflicts. The teachers in this study enhanced their reflective abilities when they were able to assess the needs of self and others through perspective-taking strategies. They became more sensitive and

responsive to the needs of others, including individual children, and therefore, enhanced their professional skills as well as their confidence. Open communication can enhance the reflective competence of the teachers (Byram et al, 2004). Being open results in a willingness to make a commitment to managing conflict in a collaborative way, which leads to competence in individual innovations (Nicotera, Smilowitz, & Pearson, 1990).

Self-confidence and Teacher Efficacy

Teachers hired from inside the institution. Almost all participants mentioned their experiences of low self-confidence during the first month in the program, especially those teachers from inside the institution who have an average of fifteen years teaching experience there. The quantitative result on Teacher Efficacy for the teachers from inside the institution reveals a lack of change before and after being in the program for a year. More interestingly, 50 percent of the participants from inside the institution decreased in Teacher Efficacy after a year in the program. This finding may suggest that the teachers from inside the institution still had a belief in their teaching based on the years they had worked with the children in the institution. It is important to note that all the participants from inside the institution are assigned by the institution to work in the HTS program; they do not choose to work in the HTS program. Thus they are less ready mentally and physically for the new challenge of changing traditional authoritarian practices to child-centered progressive practice. Almost all teachers from inside the institution described their previous teaching role in the institution as authorities over children, maintaining

control to keep children obedient and quiet in the classroom. The fundamental adjustment to give up power and control over children may also play a significant role in their difficulties with challenges presented by the program at the beginning. Change undermines an individual's ability to perform with confidence and success (Bolman & Deal, 1999), and these factors may have affected their confidence in teaching. For example, during the first month in the program, teachers from inside the institution appeared to face more difficult obstacles than teachers from outside of the institution. They also experienced more severe emotional distress, as Participant 8 illustrated: "At that time, I felt extreme irritation and annoyance. I don't want to come back to work; I don't want to come to face the new teachers I have to work with" ("当时，我心情特别烦躁，不想回来上班，也不想回来面对新的协作伙伴") (Interview, June 2006).

The finding on the quantitative results of lower Teacher Efficacy in the post-test than the pre-test for the teachers hired inside the institution is consistent with what Woolfolk and Hoy (1990) found in their study of the efficacy beliefs and attitudes toward children: those with a low sense of Teacher Efficacy tend to have an orientation toward control, take a pessimistic view of students' motivation, and rely on strict classroom regulations, extrinsic rewards, and punishments to make students study. It is very likely that teachers from inside the institution did not realize their authoritarian attitudes and practices toward children until they became involved in HTS program. Therefore, this orientation hindered their confidence in their teaching after working in the HTS program for a year.

Teachers hired from outside the institution. During the interviews, the majority of the participants mentioned that, in addition to their open communication practice with their teammates, their success in building positive relationships with children boosted their self-confidence, especially for the teachers hired from outside the institution. The teachers from outside the institution were younger and seemed to be more open to new ideas and new ways of thinking. The experiences of teachers hired from outside the institution may explain the quantitative results that they changed more in their Teacher Efficacy than the teachers from inside the institution; they also have a higher level of teacher efficacy than teachers from inside the institution in the post measure. As children begin to open up to them, the teachers gained confidence in their teaching ability.

Participant 17's experience echoes many of the other participants' experiences:

I didn't have much teaching experience and didn't have a higher degree. I didn't have any confidence at all. Now I have learned to emphasize the process instead of the results. For example, I learned that in order to build an attachment relationship with a child, effort needs to be put forth at every moment, and I must be patient and consistent everyday, and must not worry about whether I can stop the child from crying or not. Very soon, I saw the changes in these children. I became much more confident in myself. I owe it to the children and my team teachers who always encouraged me and supported me. I am very grateful to them.

(我没有什么教学经历，也没有高学历，我对自己很不自信。我现在学会了

注重的不是结果而是过程。比如和孩子建立亲子依恋情，我学会了让自己耐心坚持每天去做，但不急于期待孩子是否会很快停止哭泣。很快，我发觉了孩子的变化。我感觉我自信了！这要归功于孩子们和我工作的其他老师们，他们总是鼓励我支持我，我很感激他们。)(Interview, June 2006)

The quantitative results on Teacher Efficacy indicate a higher change for the teachers from outside rather than inside the institution. These teachers made the choice to apply for the job when the institution sent out the hiring announcement and were aware of the changes they had to make. These results suggest that the teachers from outside of the institution were more ready mentally and physically for the new challenges and were more open to new ideas in teaching practices.

The teacher-child relationship. Building bonding relationships with children is another factor described by the participants that helped to boost their self-confidence in teaching. When comparing the self-drawings depicting their relationships with the children, there is a sharp contrast in the depictions at the beginning of the year and at the end of the year. Most of the drawings in the pre-measure show a lack of facial and emotional expressions for both teachers and children (see Appendix 5). The emotional distance between the teachers and children is also clearly defined by a certain physical distance between them. The drawings of the same group of teachers in the post-measure, however, illustrate warmth and closeness between teachers and children. More nurturing and child-centered components are presented in the post-measure drawings (see Appendix 5). For example, the size of children and teachers are the same; the teachers are

at the same level as the children (e.g., drawing from Participant 6); there is no distance between the teacher and the children (e.g., drawing from Participant 3); and there are rich and happy facial expressions on both children and the teachers (e.g., drawing from Participant 9). The change in the drawings suggests that building positive relationships with children has affected teachers' attitudes toward the children as well as their teaching beliefs.

The literature suggests that efficacy beliefs of first-year teachers are related to stress and commitment to teaching as well as satisfaction with support and preparation (Burley, Hall, Villeme, & Brockmeier, 1991; Hall et al, 1992). In order to avoid undercutting confidence and success, it is necessary to identify how people feel about change throughout the process, and to help them cope and adapt to change and make them feel more capable and competent (Woodward & Hendry, 2004).

Supportive networks in teaching and learning

Constructivism. To help the HTS teachers in this study cope with the changes, the initial one-month training and on-going professional development were intended to provide a continuous nurturing support network for the participants. The support network served as a platform for teachers to discuss their frustrations, confusions and struggles; learn to appreciate and encourage each other's work; explore different ways that they can try to work out their emotions and obstacles; and share any form of successes among them to boost their confidence. This supportive process becomes a positive learning

experience for the teachers, and many of them develop a passion for life-long learning.

Participant 16 reflected on this process:

The training definitely affects my everyday work. Whenever I would have a difficult situation, I would open my training notes, and they would boost my confidence again. I love to revisit my training notes and the various forms of activities for us. They help me reflect on myself as a HTS teacher, not the teacher I used to be who always thought I was the authority and wanted control. My confidence grew through the learning opportunities in the training, the open relationship with my peers, the continuous visits and contacts from my teachers at the HTS training institute, and my relationship with the children. I noticed I like to revisit and reflect on my previous experience in order to continue improving myself. (培训对我的每天工作影响太大了。每当我有困难时，就会重新打开培训笔记，提高自己的自信。我很喜欢重温培训的笔记和在培训时各种的学习经历。这种重温能帮助我反思自己作为基金会的老师和原来的自己不一样。原来的我只想自己是老师，要有威严和控制欲。我的自信就是在培训时开始建立，通过我和我的工作同伴们之间坦诚关系的建立，基金会培训老师不断地来访和联系，还有就是我和孩子们的情感越来越深，我觉得我对自己的自信越来越大。我注意到我现在能不断反思我的工作来完善自己。)

(Interview, June 2006).

The support network encouraged the teachers to reflect and they became more willingly to improve their professional skills.

According to a constructivist view, learners learn more effectively when information comes from different perspectives and experiences to interact actively with one another in order to construct new knowledge socially, culturally, and cognitively (Phillips, 2000). The qualitative results of this study demonstrate a transformation in the reflective skills of the participants. All the participants reported a change in their thinking capacity; they described that their thinking became broader and multi-layered, and they began to consider multiple perspectives. According to Pratt (1991), Chinese society recognizes the individual primarily as a member of the whole, placing greater emphasis on duty rather than individual rights; the roles of social identity reflect the hierarchically-operative society where most individuals are located at the bottom of a virtual tower of bureaucracy. Thus, most individuals in China tend to be followers and fulfill societal duties without challenging their own critical thinking skills in terms of self-reflection and questioning authority. Many participants in this study described themselves as simple thinkers who tended to look for quick answers to problems before becoming HTS teachers. Participants described that they learned to ask themselves questions, to recast previous experiences, to allow themselves to consider more possibilities for solving the problem, and to listen to others generate their own thoughts during the training and through their work experiences as HTS teachers. These new and broader thinking perspectives helped the teachers enhance their progressive educational understanding and practice with the institutionalized children.

The enhanced reflective competence of the participants facilitates their teaching and learning to effectively adapt the Western combined educational practice with Chinese institutionalized children. Therefore, the children benefit greatly in the nurturing learning environment where each other's thoughts are valued, they are encouraged to speak out, and the children are appreciated and valued by the classroom community. This helps the children create a stronger sense of belonging and ownership of their environment, and become responsible in building their own futures (Edwards, Cotton, & Zhao, 2007).

According to the quantitative results, some items in the Constructivist Beliefs measure increased greatly from the pre-test to the post-test. For example, Item 1 asks teachers whether they agree or disagree with having a classroom environment full of high quality materials that have been tested as very effective or not. A traditional Chinese teacher tends to agree because it emphasizes structure and order. The participants in this study changed their rating from "agree" during the pre-test to "disagree" at the post-test. Item 9 asked whether the participants believed that children learn best by finishing a series of simple procedures in order to make fewer mistakes. Those who hold a constructivist view believe children learn best from trial-error learning experiences. The HTS teachers made a big change in responding to this question between the pre-test and post-test by shifting toward a more constructivist paradigm. Apparently, their new teaching and learning experiences have transformed their teaching beliefs and attitudes toward children into more constructivist-centered attitudes.

Tolerance of ambiguity. The noticeable change in Tolerance of Ambiguity among the participants provides another lens for interpreting the relationship between reflective competence and level of Tolerance of Ambiguity that affected the professional development of the participants including Teacher Efficacy. Being able to cognitively take multiple perspectives into account allows a person to enhance her/his reflective competence and thinking capacity, and hence, in dealing with uncertainty and ambiguous situations (Bryam et al, 2004). Tolerance of Ambiguity has been highlighted as important in the development of creative and reflective thinking in teachers (DeRoma, Martin, & Kessler, 2003). Asking participants whether they liked ambiguous situations or not was the item that showed the strongest increase in the Tolerance of Ambiguity. Compared to the pre-test, the participants demonstrated that their level of Tolerance of Ambiguity increased dramatically after a year in the program.

Study results reveal that another item showed a dramatic increase among the participants in their Tolerance of Ambiguity: the question that asked participants to measure whether they “find it hard to make a choice when the outcome is uncertain.” According to Rogers (2003) and Hord et al. (1987), the stages of the decision-making process affect the adoption of an innovation. Rogers (2003) further states that the attributes of the innovation and characteristics of the educators also have an impact on the innovation adoption. Apparently, teachers felt more comfortable in making choices even though they knew the outcomes to be uncertain in their post-test a year into the program.

This change suggests that the teachers became more positive and flexible in addressing the changes and innovations after a year in the program.

Studies show that teachers with high levels of Tolerance for Ambiguity tend to ask more questions and make more tentative hypotheses (Grant, 2001). Many teachers in the study illustrated an increased ability to ask questions of themselves and with children.

As Participant 9 describes herself:

I like to think more now by asking more questions when I watch a child playing, or ask the child questions to help her think more creatively. I often ask myself how to make the activity more creative and rich with materials; how can I make children happier when they learn? It makes me want to read and explore more. I don't feel it is a pressure anymore. Instead it makes me excited that I have such desire to learn. (我现在喜欢动脑筋，在观察孩子玩的时候会喜欢自己问问题，会对孩子提问题帮助她更有创造力。我经常问自己如何能使活动和材料更丰富。如何让孩子更快乐？这样促使我想去看书，去学习去探索。我不再觉得是压力，相反，我为能自己想学习感到兴奋。)(Interview, June 2006)

These results suggest that the teachers' ability to see themselves as learners along with children and their Tolerance for Ambiguity go hand in hand.

When competence in reflection and Tolerance for Ambiguity increases, teachers began to see themselves changing in their interpersonal skills in their family relationships as well. All participants who were also mothers reported that they began to be aware that their relationship with their sons and daughters were too demanding and controlling.

They began applying the new ideas of the teacher-child relationship to their parenting styles at home. Participant 1 shared her changes in her relationship with her school-age son:

I used to criticize him a lot and was always mad when he was not willing to listen to me. I expected him to follow my plan for his life. I often got frustrated with him. Since the training, I began to control my temper and telling myself to learn to listen to him, and let him to express his thoughts before I rush to make a judgment or decision for him. I noticed he is more willing to talk to me now. (我原来会经常批评我儿子。当他不愿听我话时，我总是很生气。我要他按照我的想法生活，经常的，我很恼火。从培训开始，我开始注意控制我的脾气，告诫我自己要学着听他说他的想法，不要急于下主观结论或替他作决定。我发觉我儿子现在愿意和我谈话了。) (Interview, June 2006)

The increasing reflective capabilities and Tolerance for Ambiguity does not just potentially benefit the children with whom the teacher works, but also their own children, if any.

Other teachers reported receiving comments by people around them telling them that they have changed and are happier, more willing to talk to other people, and are more sensitive to others. Participant 20 described the feedback she heard: “My family and friends told me that I had changed to become a happier person who begins to listen to others’ perspectives with respect and pay more attention to others’ needs” (“我家人和朋

友都说我变得快乐了，愿意听别人的意见了，对别人的需要也很在意了”)

(Interview, June 2006). These new teacher qualities may affect not only a teacher's professional life, but one's personal life as well.

Summary

The findings of this study conclude that teacher preparation plays a critical role in preparing teachers to be mentally and physically ready to address the cultural, pedagogical, and philosophical challenges when adapting to the combined Western-Chinese intervention program for institutionalized children in Guangzhou Children Social Welfare Institution, China. Ongoing support systems are also of vital importance in facilitating support networks for teachers during the most difficult times of their first year of innovative teaching practice. Open communication is one of the most challenging obstacles these teachers have to encounter and to embrace as their professional skills at the same time. With the experience of the training and the ongoing HTS support network of the teachers, open communication became one of the first milestones gained by the teachers to help them boost their confidence in working with others. Learning to be reflective was another successful milestone for the teachers to broaden their perspectives about child development and the teacher-child relationship. This, in turn, transformed the teacher-child relationship and the teachers' attitudes toward the children. The teachers became passionate about each child and viewed their work as long-lasting teaching and learning practices. Higher levels of Tolerance of Ambiguity developed over the year,

allowing teachers to become more tolerant and less critical and controlling of children and other people – a process of transformation and betterment of self. (Figure 6.1)

However, the findings also suggest that resistance to change often produces more anxiety and emotional distress, especially for those people who are more prone to traditional beliefs and practices, such as some of the teachers from inside the institution experienced. They experienced more frustration and are more likely to be resistant to change. As a result, their confidence in their teaching skills may decrease. Nurturing the well-being of these teachers needs to be included as part of an innovative training curriculum; an ongoing support system needs to be in place to ensure that positive transitions and transformations take place smoothly and successfully for all teachers.

This study provides evidence to suggest that although children without parents or loving guardians are vulnerable to behavioral, learning, and emotional problems, they can benefit enormously from interventions that address their needs comprehensively and foster their emotional intelligence as well as cognitive and language skills. Blending educational and organizational practices across cultures is feasible when teacher preparation helps teachers develop a passion for these children while teacher educators have faith in the transformative potential of teachers who work with these children.

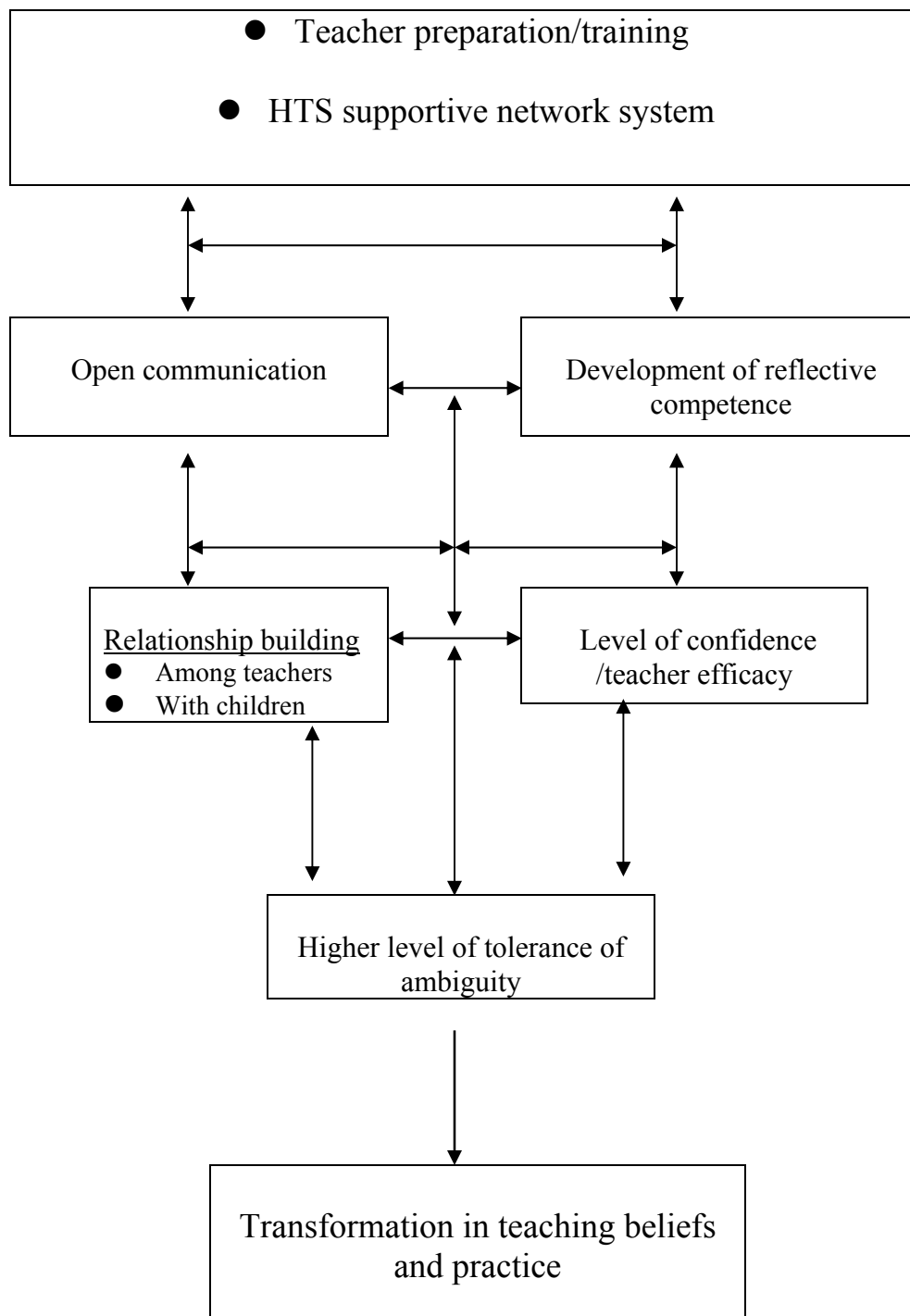


Figure 6.1: *A diagram of the transformation process*

Delimitation and limitations of the study

The purpose of this study was to examine teachers newly engaged in working with children at high risk using combined Western and Chinese teaching practices. Therefore, study subjects were not selected randomly. Instead, the selection of the subjects was limited to those who chose to work for Half the Sky programs. Only those who were newly trained teachers were participants in this study.

Because the study subjects were limited to twenty participants, there are some limitations that need to be addressed: (1) Since it is impossible to include a larger sample of teachers, some potential factors may be excluded when explaining the results; (2) The one-time-only interview may not fully assess the depth of each participant's experience and, thus, may lead to biased interpretations; (3) Due to the sensitive situation of children in this study, assessment of children could not be performed, so findings may have limitations when it comes to explaining the correlation between the changes in teachers and changes in children. The absence of measurements of children's outcomes may make the interpretation of the mixed methods analysis incomplete when explaining the process of and impacts on the transformation of the teachers. Measurement of the children's outcomes should be conducted along with the outcomes of the teachers' changes to study the correlation between changes in teachers and children. This future research may prove relevant for teacher training and preparation literature in general as well as for teacher preparation curriculum for children at high risk.

Another limitation to the study was in the procedure of collecting self drawing data in the research design. The difference in the times and places where participants were asked to complete the drawings between the pre- and post-measure may cause internal reliability inconsistency, and thus was likely to affect the interpretation of the findings.

Another limitation was the variable PW (Prior Workplace) was confounded with the age and experiences. The teachers who were hired from inside the institution were older and experienced. The degree of confounding was great. Therefore, the variable can not be statistically separated.

There is also limited generalizability to the results because of the sample selection procedure. The sample in this study was not randomly selected since the purpose of this research was to study a group of teachers working with institutionalized children when adapting a Western combined Chinese teaching approach. Therefore, one should be cautious when generalizing the findings to broader populations. When the sample size is too small, the experiment will lack precision in providing reliable answers to the question the research is investigating (Tabachnick & Fidell, 2001). Due to the small size of the sample (N=20) in this study, the statistical tests had low power. Future studies should be conducted with larger sample sizes to ensure that results are more reliable and more powerful in statistical analysis, and therefore, to increase the accuracy in interpreting the results of the research question of the study.

Generalizability is also limited because the unique setting and the participant sample restrict ability to generalize these findings to larger populations. Qualitative studies mainly focus on the description of the data rather than on outcomes of the data (Creswell, 1998), and the findings are limited to the subjects that are studied. In addition, the small number of research subjects may also restrict the validity of the quantitative results.

Finally, the instrument of Constructivist Beliefs is in the process of earning its reliability and validity; some items may still need re-defining or revising. Therefore, the result on this scale may have some biases in measuring constructivist beliefs and reflective competence. A study could be conducted to validate the measure to ensure culturally reliable and validated measures for reflective competence in cross-cultural studies. Participants could form a focus group to explore each item and whether the meaning they understand is the same or similar to the original meaning in English. In addition, participants could discuss whether or not it was relevant when discussing reflective thinking practices within their own experience, and compare it to the definition in English for agreement in meanings.

Future research

Future studies are needed to identify factors or specific variables that affect the levels of the changes in the teachers to help teacher-educators develop more culturally and pedagogically appropriate teacher preparation curriculums with a global perspective.

The length of the study (one year) may limit the picture of the transformation of the teachers who have a slower-than-average adaptation process. A follow-up study needs to be conducted to examine whether the more slowly-adapting teachers will be able to successfully internalize the innovative and progressive teaching practice as their peers as well as studies on the different needs these teachers have in learning new ways of teaching.

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Appendix 1

Consent form (Chinese and English)

INFORMED CONSENT FORM

IRB#

East Meets West: Transformation in Teaching Practice of Chinese Teachers Blending Western and
Chinese Educational Approaches for Orphanage Children in China

The purpose of this research is to study how new teachers in Half the Sky programs reflect upon their teaching practice during their first six months of work. You are invited to participate in this project because you are a new teacher for Half the Sky. The purpose of this research is to find out teachers' experience of their professional and personal growth and change as they go through training and the early stages of their work to help the training institute to strengthen and continue improving the quality of its training model.

During your training, you will be asked to fill out three short questionnaires and provide some information about your family, education, and teaching experience. The total time will take about 45 minutes. These questionnaires are intended to find out about your beliefs about teaching, children's learning, and how comfortable you are with ambiguous situations when making a teaching related decision. After six months of work for Half the Sky, you will be asked to fill out the same questionnaires again. In addition, you will be interviewed by a project research assistant in person and asked to provide an audiotaped interview about your working experience and learning in the past six months. This interview will last 60 minutes or less.

There are no known risks or discomforts associated with this research. We hope that you may get something positive out of this experience, as well, in reflecting on yourself. Once the research is completed, the principal investigator will give a presentation on the results at a Half the Sky Conference. No names will be associated with any quotes or interpretations in that report, but it will provide you a chance to hear and comment upon the findings.

All the information obtained from you will be strictly used for the research only. The tapes will be transcribed and destroyed. No names will be attached to any of the data. The data (anonymous) will be kept in a locked drawer in the principal researcher's office. All the data will be kept for three years and then will be destroyed afterwards.

There will be no compensation for participating in this research.

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call the researcher at any time at 13067923408 in China. If you have questions concerning your rights as a research subject that have not been answered by

the researcher or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965, or send e-mail to irb6956@unlnotes.unl.edu

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the researcher, Half the Sky Foundation, or the University of Nebraska. Your decision will not result in any loss or benefits to which you are otherwise entitled.

You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

(Please initial at the bottom of this page to indicate you have read the first page)

 Check if you agree to be audio taped during the interview.

Signature of Participant:

Signature of Research Participant

Date

Wen Zhao, Principal Investigator

(402)489-9966 (USA), 13067923408(in China)

Carolyn Pope Edwards, Ed.D,

研究课题意向说明

IRB#

东西文化的结合: 如何将中西教育理念有效地结合起来改变中国儿童福利院教师的教育观

此研究的目的是研究半边天基金会老师的最初六个月在项目工作时对自己教学反思能力的变化. 您受此研究邀请来参与此研究. 此项研究通过研究教师工作初期的业务和自我发展与培训之间的关系,从而帮助基金会培训机构质量的不断提高与发展.

在培训时,您会填写三份不同的问卷,并提供一些通常的背景情况,包括家庭,受教育水平,和教学经验. 所有填写时间大约在 30-45 分钟时间. 这些问卷主要是了解您的教学理念,儿童学习理念,以及对与一些教学境况的看法. 除此之外,您在工作六个月时,会有一个访谈机会,谈谈你的工作经历和感受,此面谈大概在一小时左右.

此研究没有任何的不适或是可知的危险性. 我们希望您能从中得到了解自己的一个好机会. 当此研究完成后,主要研究人员会将研究成果在基金会研讨会上宣布. 所有参与提供数据的老师将受到隐私的保护,姓名将被隐去,但您有机会了解该研究的结果并发表自己的看法.

从您所处得到的所有情况将只严格地用于本研究. 录音磁带一旦用文字记录下来之后马上销毁该录音磁带. 所有数据将是和无记名方式存档. 这些无记名数据将保存在主要研究者的办公室上锁抽屉里. 所有数据将在 3 年后销毁.

您可以在该研究进行之前或是在中途中的任何时候提出自己的问题或是担忧. 可以联系主要研究者 13067923408, 就您对自己权益所关心的问题与该研究者进行讨论沟通, 或可以电至美国内布拉斯加林肯大学被研究者权利保护委员会, 电话: 402-472-6965, [或发邮件至 irb6965@unlnotes.unl](mailto:irb6965@unlnotes.unl)

您可以在任何时候退出该研究的参与. 您的行为不会影响到您与美国内布拉斯加林肯大学的联系, 美国半边天基金会, 或是该研究工作人员的关系. 您的不参与也不会给您带来任何对您利益的不利.

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(请在阅读完此页后在下面线上签名)

如果同意将您的谈话录音, 请打勾.

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Appendix 2

Interview questions (Chinese and English)

Interview Questions

1. What were the most difficult moments for you when you were working with the children in the first month?
2. How did it make you feel when you were having the difficulties during the first month? Do you feel the same when dealing with the difficulties between the first two months and now? If not, please describe how and why.
3. Please describe in detail what made you stay in the program and didn't give up during the most difficult time.
4. Please describe how you worked through one difficult situation in your teaching practice that made you proud and one that made you disappointed, and why?
5. Please describe one teaching situation with children you had and you wish you want to do a different way now.
6. Please describe one teaching situation with children you had that you wouldn't do the same if you were not trained as a HTS teacher.
7. Please describe the training that helped you going through the difficulties and those didn't.
8. Please explain the changes in yourself about teaching and learning by comparing before becoming a HTS teacher and after as a HTS teacher.
9. When did you realize you began to change? And how do the changes mean to you in terms of your professional career and your life in general?
10. How did you see the blending of western and Chinese affect your beliefs and values about children, education, and your life?
11. What do you envision yourself in a year from now?

面试题

12. 在第一个月的教学工作中，你所遇到了哪些你认为是最困难的情况？
13. 在你面临这些困难时，你的心情如何？你现在的心情和头一两个月的心情是一样的吗？如果是不一样的，请具体描述一下为什么，怎么不一样。
14. 请仔细描述一下有哪些具体的方面在你面临最困难的时候使你没有放弃，岸坚持干到了现在？(生活的需要，就业，工资的吸引度，工作的轻松度，工作的特点，等)
15. 在面临这些困难时，请描述一个当时使你感到为自己自豪的教学行为，一个使自己感到沮丧的教学行为，为什么？
16. 请描述初期你和一个和孩子交流时认为是满意的教学行为，但现在却觉得你可以做得更好。
17. 请描述一个你现在的教学行为，如果你没有参加小姐妹项目，你是不会这样做的。
18. 请具体说一说那些培训的内容和方法帮助你度过这些困难，那些没有。

19. 请具体说说你成为半边天基金会老师之后的变化，与以前的你和现在的你做一个比较。(可以从认识自我来谈, 现在的自我快乐或是满足感觉和原来的我有什么不一样? 现在理解的快乐满足和原来的快乐满足有什么区别?)
20. 你是什么时候开始注意到自己的变化的? 这些变化对你的教育观，儿童观，和对你的生活意味着什么?
21. 你在自己的思维方式上有了哪些变化? 你对反思的理解有哪些和原来不一样的?
22. 你是如何看待现行小姐妹教学理念的模式影响到你观念的变化，包括如何看待儿童，你对教育的看法，以及你自己的生活观念。

Appendix 3

Measures (Chinese and English)

- 1 2 3 4 If a child in my class becomes disruptive and noisy, I feel assured that I know some strategies for dealing with the situation.
- 1 2 3 4 Positive experiences at school can make up for negative experiences outside school.
- 1 2 3 4 If a child is not successful completing a learning experience, I would be able to provide appropriate alternatives to help that child.
- 1 2 3 4 Even a teacher with good teaching abilities may not reach many children.
- 1 2 3 4 If a child learns something thoroughly, this might be because I was able to teach him or her effectively.

教师教学能力问卷

1= 强烈不同意

2=不同意 (在原则上不同意, 但是...)

3=同意

4=非常赞同

(1). 1 2 3 4 孩子能否学好主要是和家庭背景有关。

(2). 1 2 3 4 我可以成功的指导任何孩子, 甚至是最难管的孩子。

(3). 1 2 3 4 我可以有效的把特教孩子加入到我的教学活动中来。

4). 1 2 3 4 具有天赋的孩子和他们的家长对老师具有一定的难度。

(5). 1 2 3 4 当一位孩子的学习超越了他自己平时的水平, 许多时候是因为老师付出了巨大的努力。

(6). 1 2 3 4 对于孩子的影响来说, 与家庭环境影响相比, 在我的课堂时间或是在学校学校时间并没有受多大的影响。

(7). 1 2 3 4 如果孩子不能在家里得到常规的培养, 他们不太可能在其他场合接受任何的常规。

(8). 1 2 3 4 当一位孩子对一项学习任务产生了困难, 我会及时调整改变此学习任务来达到她的发展水平。

(9). 1 2 3 4 老师对一个孩子的教育是否成功被局限于孩子自身的家庭环境, 因为家庭环境的影响主要决定了孩子的成长。

(10). 1 2 3 4 当孩子的学习能保持在高水平线上, 这通常是应为老师找到了一种更适应这孩子的教学方法。

(11). 1 2 3 4 我可以为孩子提供多元文化的学习环境来适应不同文化背景的孩子。

(12). 1 2 3 4 当孩子们学会了用多种途径来使用课堂材料时，是因为老师找到了更有效的启发
教学式。

(13). 1 2 3 4 如果家长对孩子的发展可以有如此大的影响力，我也可以。

(14). 1 2 3 4 如果一个孩子在学习中感到烦恼不安时，我知道我会如何去帮助她使她感到有成
功感。

(15). 1 2 3 4 我有能力能与不同背景文化的家长或是孩子就不同的看法进行沟通。

(16). 1 2 3 4 如果有孩子在课堂上有吵闹现象，我自信的认为我有方式方法来解决这样的现
象。

(17). 1 2 3 4 孩子可以通过在学校里的积极正面的影响来抵触校外的负面影响。

(18). 1 2 3 4 如果有孩子无法成功地完成一项学习任务，我会提供其它合适的途径来帮助她完
成。

(19). 1 2 3 4 既是一位老师有很好的教学能力，她也有可能无法接触到所有孩子。

(20). 1 2 3 4 如果孩子能对某一事物学得很透彻，这有可能是因为老师教的方法有效。

Tolerance of Ambiguity Questionnaire

1=Almost totally disagree (“For the most part, no”)

2=Mostly disagree (“No, with some minor qualifications ...”)

3=Slightly disagree (“No, but with major qualifications ...”)

4=Neither agree nor disagree (“My areas of agreement and disagreement are about equal”)

5=Slightly agree (“Yes, but with major qualifications ...”)

6=Mostly agree (“Yes, with some minor qualifications ...”)

7=Almost totally agree (“For the most part, yes”)

1. 1 2 3 4 5 6 7 I don't tolerate ambiguous situations well.
2. 1 2 3 4 5 6 7 I find it difficult to respond when faced with an unexpected event.
3. 1 2 3 4 5 6 7 I don't think new situations are any more threatening than familiar situations.
4. 1 2 3 4 5 6 7 I'm drawn to situations which can be interpreted in more than one way.
5. 1 2 3 4 5 6 7 I would rather avoid solving a problem that must be viewed from several different perspectives.
6. 1 2 3 4 5 6 7 I try to avoid situations which are ambiguous.
7. 1 2 3 4 5 6 7 I am good at managing unpredictable situations.
8. 1 2 3 4 5 6 7 I prefer familiar situations to new ones.
9. 1 2 3 4 5 6 7 Problems which cannot be considered from just one point of view are a little threatening.
10. 1 2 3 4 5 6 7 I avoid situations which are too complicated for me to easily understand.
11. 1 2 3 4 5 6 7 I am tolerant of ambiguous situations.
12. 1 2 3 4 5 6 7 I enjoy tackling problems which are complex enough to be ambiguous.
13. 1 2 3 4 5 6 7 I try to avoid problems which don't seem to have only one “best” solution.
14. 1 2 3 4 5 6 7 I often find myself looking for something new, rather than trying to hold things constant in my life.
15. 1 2 3 4 5 6 7 I generally prefer novelty over familiarity.
16. 1 2 3 4 5 6 7 I dislike ambiguous situations.
17. 1 2 3 4 5 6 7 Some problems are so complex that just trying to understand them is fun.
18. 1 2 3 4 5 6 7 I have little trouble coping with unexpected events.
19. 1 2 3 4 5 6 7 I pursue problem situations which are so complex some people call them “mind boggling.”

20. 1 2 3 4 5 6 7 I find it hard to make a choice when the outcome is uncertain.
21. 1 2 3 4 5 6 7 I enjoy an occasional surprise.
22. 1 2 3 4 5 6 7 I prefer a situation in which there is some ambiguity.

当你身处一个无明确方向性的境地时，你会怎么办.....

1 完全不同意

2 大体上不同意

3 有些不同意

4 两者皆可

5 有些同意

6 大体上同意

7 完全同意

1. 1 2 3 4 5 6 7 我觉得无明确方向性的问题很难处理。

2. 1 2 3 4 5 6 7 对于突发情况，我觉得很难应对。

3. 1 2 3 4 5 6 7 我觉得突发现象并不比常见现象棘手。

4. 1 2 3 4 5 6 7 我更倾向于能从多方面来了解的一个局面。

5. 1 2 3 4 5 6 7 我会避免处理一些需要从多角度来考虑的问题。

6. 1 2 3 4 5 6 7 我会尽量避免处理一些无明确方向的问题。

7. 1 2 3 4 5 6 7 我很擅长处理突发事件。

8. 1 2 3 4 5 6 7 相对于新的问题，我更喜欢处理一些熟悉的问题。

9. 1 2 3 4 5 6 7 当处于某种境地需要多方位的去考虑时,我会感到不安.

10. 1 2 3 4 5 6 7 我避免面对一些过于复杂使我难于理解的处境。

11. 1 2 3 4 5 6 7 我能承受这些两难问题所带来的压力。

12. 1 2 3 4 5 6 7 我喜欢应付这些棘手的、复杂的局面。

13. 1 2 3 4 5 6 7 我尽量避免有多个“最佳”选择的局面。
14. 1 2 3 4 5 6 7 我觉得我经常为自己寻找新事物，而不是守着在我生活中熟悉的东西。
15. 1 2 3 4 5 6 7 我更喜欢新颖的东西。
16. 1 2 3 4 5 6 7 我不喜欢无明确方向性的局面。
17. 1 2 3 4 5 6 7 有些问题是如此复杂以至于在理解它的时候你会很有意思。
18. 1 2 3 4 5 6 7 对于突发事件，我应付自如。
19. 1 2 3 4 5 6 7 我很喜欢处理一些对旁人来说“伤脑筋”的问题。
20. 1 2 3 4 5 6 7 当结局变幻莫测的时候，我很难做出决定。
21. 1 2 3 4 5 6 7 我喜欢一些偶尔的惊喜。
22. 1 2 3 4 5 6 7 我喜欢处理那些带有无明确方向性的问题。

Constructivist Beliefs

1=strongly disagree

2=generally disagree but it is partly correct (disagree, but...)

3=generally agree but partly incorrect (agree, but...)

4=strongly agree

Physical environment:

1. I like the environment with full of high quality materials and those materials have been tested by predecessors very effective.
2. I like the environment that can provide opportunity for children to create or organize materials to make structure and perform.
3. I like the environment that can help children focus on searching of materials .

Parents: What kind of parenting role do you like?

4. Parents should be totally involved in the class curriculum plan, financial budget, human resources management.
5. Parents should provide their feedback on the projects, and participate in the parenting committee.
6. Parents should assist on teaching if necessary. For example, they can join in students to make a on-the-spot investigation, to plan, to raise money, etc.

Study in the class. What is the best way for children to learn?

7. Children learn problem solving study questions among peers' interactions by themselves. They do not need to get the correct answers from teachers.
8. Children learn from designing personal goals and then practicing them independently.
9. Children learn from finishing a series of simple procedures in order to make fewer mistakes.

Curriculum: Which curriculum is the most important?

10. Adults observe and help each child based on his or her study goals.
11. Adults set up the study goals for children every school day; they should make plans to help children learning.
12. Adults provide opportunities for children to bring them into close study groups. Children will make their study plans by themselves.

Social interaction: How do children learn to interact with others?

13. Children learn how to cooperate with others by role playing that is related to other children.
14. Children learn social behaviors from observing the models of other children.
15. Children can learn the most by participating in small group discussions and negotiations.

As a learner, how can I get the best way to study?

16. I learn the most when I follow other people successful experience and get the help from experts.
17. I learn the most when I work with others.
18. I learn the most when I work myself and fin a way to solve the problems independently.

教学反馈

指导语：

这个问卷是用来帮助你整理自己思路的。在完成过程中，你需要判断作为一名老师或者负责人你在多大程度上同意或者不同意以下说法。如果你不是你们机构的负责人，假设你是。对于每种说法圈出你的一种态度。

1=强烈反对（很大程度上不同意）

2=不同意但是有所保留（不同意，但是……）

3=同意但是有所保留（同意，但是……）

4=强烈同意（很大程度上同意）

物理环境 哪一种环境或教室你更喜欢

1. 我喜欢一个充满高质量现成材料的环境，这些材料经过前人检验非常有效。
2. 我喜欢一个能够让孩子创造组织材料进行搭建和戏剧表演的环境。
3. 我喜欢一个能够帮助孩子专注于独立探索材料和物体的环境。

家长 你喜欢怎样的家长角色

4. 家长应该是课程安排，财政预算和教职员雇用的全面参与者和合作者。
5. 家长应该对于项目提供反馈，并且参与家长委员会（如果存在这个机构的话）。
6. 家长应该为教学提供所需的帮助，比如参与学生实地考察，联欢会，筹款活动。

课堂学习 你认为孩子如何学习最好

7. 孩子通过自己解决同伴交往中的问题学习，无需从老师那里得到正确答案。
8. 孩子通过设定个人目标，然后独立实践探索来学习。
9. 孩子通过完成一系列简单的步骤尽可能少犯错误来学习。

课程安排 哪种计划是最重要的

10. 成年人根据每个儿童的目标，观察帮助那个儿童。
11. 每天上课时应该由成人为儿童设定目标，安排儿童需要学习的技能。
12. 成人为儿童创造条件将他们领入亲密的工作组，由他们设定自己的计划。

社会交往 儿童如何学习与人相处

13. 儿童通过扮演和其他孩子相联系的角色来学习与人合作。
14. 儿童通过观察模仿其他孩子的好榜样学习社会行为。
15. 儿童在小组讨论争辩和协商的过程中学习最多。

我自己作为一个学习者 我如何学得最好

16. 我实践他人成功经验并得到专家指点的时候学得最好。
17. 我在与他人合作时学习的最好。
18. 我经常需要通过自己独立工作理清思路来解决问题。

Appendix 4

Background information form

Background Information

Please answer the following questions:

What is your age? _____

What is your gender: M F

What is your current position?

- _____ Teacher-in-training (university student)
- _____ Preschool teacher or childcare provider for age 3-5
- _____ Infant/toddler teacher or provider for age birth - 3
- _____ Family advocate or student-parent teacher
- _____ other (please specify: _____)

How many years of experience do you have teaching or delivering services in an early childhood setting?

_____ years _____ months

How much formal education do you have (please check only one)?

- _____ less than high school
- _____ high school diploma or GED
- _____ some training beyond high school but not a degree
- _____ two year degree (or in process)
- _____ four year degree (or in process)
- _____ graduate training or graduate degree (or in process)

If you have (or are working on) a degree, was your field of study child-related? ___Yes ___No

What was or is your major? _____

Do you have (or are you working on) an early childhood teaching endorsement? Yes___ No___

Have you completed a Child Development Associate (CDA) certificate? Yes ___ No ___

Appendix 5

Self drawings (pre- and post-measures)

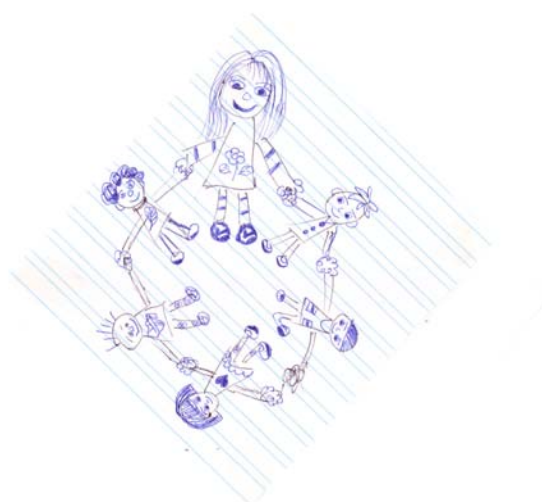
Participant 1

Pre-measure drawing



Post-measure drawing



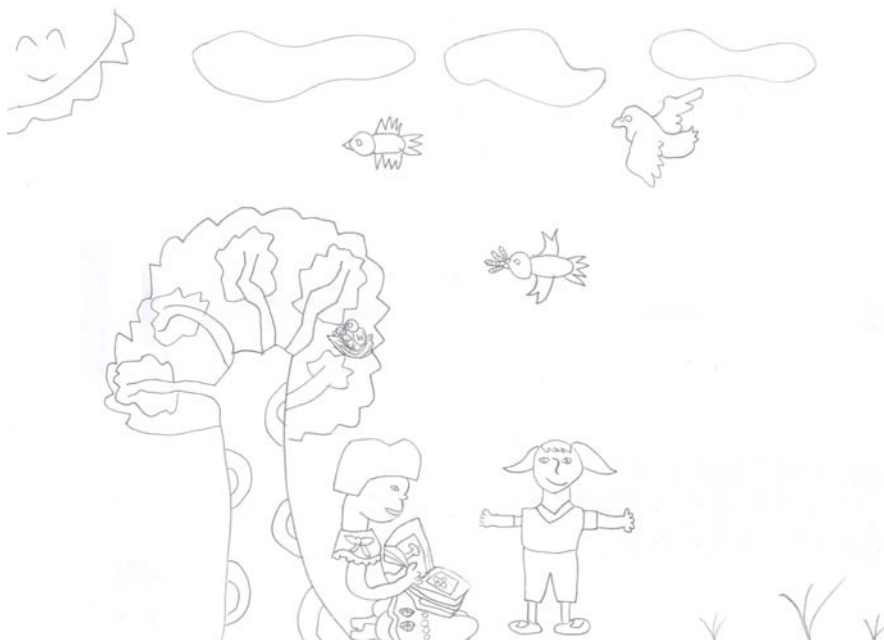
Participant 4*Pre-measure drawing**Post-measure drawing*

Participant 5

Pre-measure drawing



Post-measure drawing



Participant 6

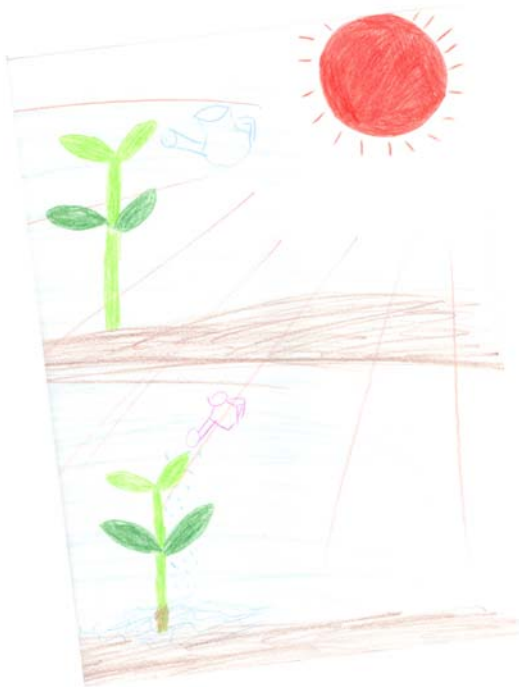
Pre-measure drawing



Post-measure drawing



Participant 7*Pre-measure drawing**Post-measure drawing*

Participant 8*Pre-measure drawing**Post-measure drawing*

Participant 10*Pre-measure drawing**Post-measure drawing*

Participant 11

Pre-measure drawing



Post-measure drawing



Participant 12

Pre-measure drawing



Post-measure drawing



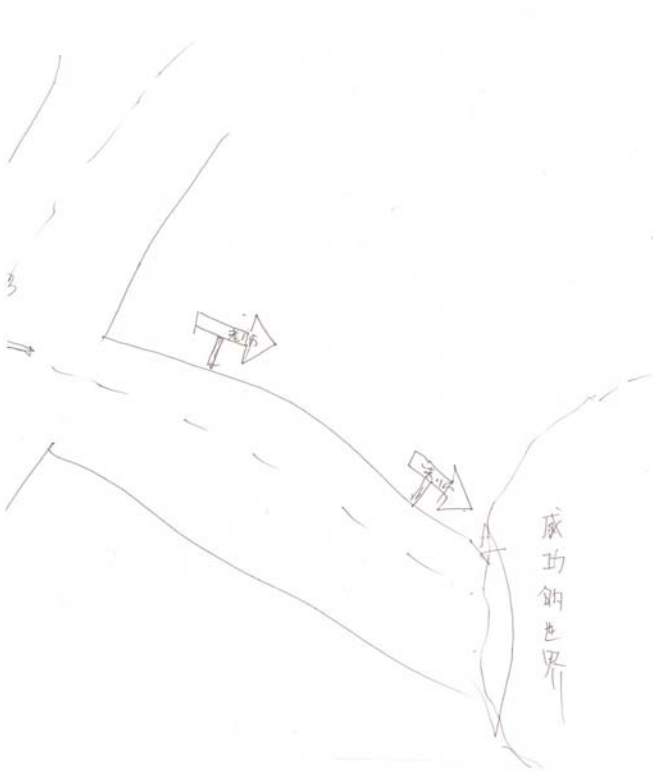
Participant 13

Pre-measure drawing



Post-measure drawing



Participant 14*Pre-measure drawing**Post-measure drawing*

Participant 15

Pre-measure drawing



Post-measure drawing



Participant 16*Pre-measure drawing**Post-measure drawing*

2007/4/29

Participant 17*Pre-measure drawing**Post-measure drawing*

Participant 18

Pre-measure drawing



Post-measure drawing



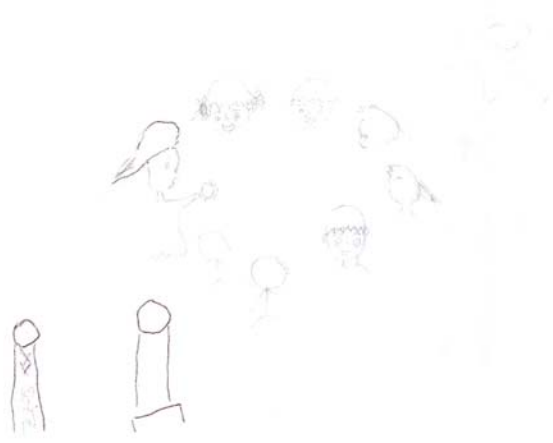
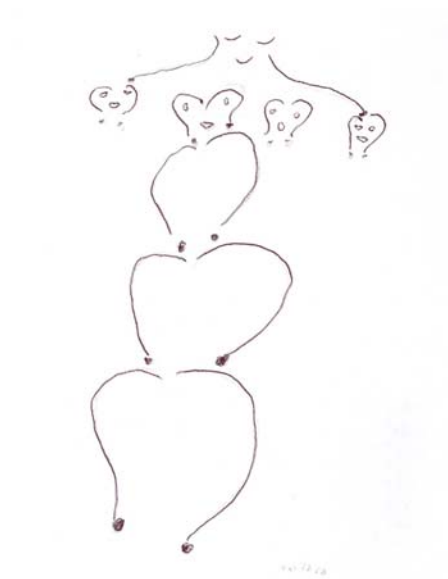
Participant 19

Pre-measure drawing



Post-measure drawing



Participant 20*Pre-measure drawing**Post-measure drawing*

Appendix 6

Codes (Chinese)

Codes	Small units from the interviews	notes	categories
1. 无沟通	不知道如何与院内老师沟通； 不知道如何与别人交流；想找人情愫，找不到能够理解我的人，想找年轻老师，又怕他们不接受我建议；	沟通的矛盾 可于配合结合起来，来自于同一个人说法	矛盾/冲击/困难
2. 无沟通心情	压抑，苦恼；猜疑，不信任，焦急，生气，孤独；		
3. 学会沟通	当我第一次把我的想法告诉其他老师，才知道自己顾虑太多，猜疑太多，造成误会； 和别人就是一件快乐的事，我用真诚坦诚对待对方，得到了对方的信任和理解。		
4. 沟通的心情	轻松，快乐；心情平和了；		
5. 团队	我们现在工作是在沟通前提下的，所有困难一起想办法解决； 我们之间缺乏了解，有自己的想法，无法与年轻老师配合；	团队与沟通的关系	配合与协作
6. 孩子初期行为	我无论怎样交流和嬉戏，她好像对我所作的一切没有反应； 稍不如意，就摔玩具或者脱衣服躺在地上哭闹；		福利院儿童特征/困难
7. 令自己骄傲的行为	我一直没有放弃，坚持每天拥抱她，陪她游戏； 当她发脾气时，我总是第一时间过去拥抱她，抚摸她的手和后背，传递我很爱她的信息；	亲自依恋情建立	师生关系
8. 孩子目前行为	孩子每次看到我，都会远远的大声喊：樊老师好！；		师生关系
9. 倾听	为孩子提供表达机会，去了解孩子内心；去揣摩孩子； 一个孩子第一次看到孔宝，大哭起来，潘雪玉老师抱起来，轻轻拍着背，轻轻地说：胡老师很喜欢你的，抱着他走到阳台：看，中班小朋友在捡树叶，。。。	与亲子依恋情的联系 摘自李萍广州观察日记	师生关系
10. 教师是权威者	我以前不会在乎孩子的内心		冲击/师生关系

	需求，想法，不站在孩子角度想问题，是权威者； 以前的我觉得自己是老师，对孩子有控制欲；		
11. 对我帮助最大的培训内容	协作，沟通，倾听； 老师之间的情感交流； 亲子依恋情，尊重每个人； 每当我困惑时，一定会把培训时笔记找出来看，都可以在上找到我需要的答案； 学会爱自己；		
12. 家庭母子关系	我尝试着改变我对女儿的一贯做法，用新的儿童观眼光去对待她，我可以感受到孩子受到关注和被清廷的快乐和开心； 对儿子的态度从很凶到现在经常鼓励他，他现在和我亲近多了，关系更融洽了。		家庭教育
13. 传统的教学方法	我原来认为孩子不跟自己的思路和计划走，就是自己的失败；很累。		冲击/教育观
14. 现在的教学方法	现在我是和孩子一起学习，尊重孩子兴趣； 我完全忘掉了自己是老师，和孩子们一起开心玩游戏，和他们是平等的，信任的，协作的，互相尊重的，互相学习的关系；	需采用李萍1月23日的教学反馈	师生关系/教育观
15. 一开始对新教学的怀疑	我问自己：这样孩子能学到多少东西？会浪费孩子多少时间？		冲击/矛盾
16. 现在孩子的学习环境	先要成人改变自己的教学行为和教学观念，为孩子提供选择机会，为孩子提供自主参与的机会；		教育观
17. 自我评估方式	很多时候在孩子的变化中反思自己的变化； 在学会欣赏别人的时候，站在他人立场上考虑时，我发现自己的不足，来改变自己； 我会从自己身上寻找问题了；	自我意识	自我意识发展 Self reconstruction
20. 从多方面看一个问题	我看问题的角度变了。原来只是我主观的一面，不是好就是坏，看到更多的是消极面，现在多方面的去看一个	与沟通之间的联系	反思能力/模糊境界容忍度

	问题，而且是积极地去考虑，这样使我感觉这件事并不是我想象得这么差，自己反而很开心，改变了我的心态。			
	我学会用换位思考去理解对方，站在年轻老师的角度去想问题；			
21 . 自卑	我曾经是很自卑的人，有很多想法，但觉得不如别人，常将自己封闭起来	自我意识		
21 . 自信	我学会了要喜欢自己，开始尝试着把自己想法所出来，开始欣赏自己的成功，有了自豪感。			
	看到孩子一点一滴的变化，增强了我的自信；			
	我鼓励娟娟第一次从转筒里转出来，她一下子扑到我怀里，感到成就感，很幸福；			
22 . 初期教室状况	很乱，无从下手，从培训中知道不能用传统方式；	不明确		矛盾/冲击
	孩子没有常规，玩具乱扔，破坏严重，都是哭声；			
23 . 不明确的心情	急躁，紧张，强大的压力；			
24 . 鼓励孩子	在表演时，我鼓励平时不敢大声说话的马南一边作武打一边让他大声喊；然孩子感受到自己是受尊重的；	培养孩子自信		教育观
25 . 对待特殊需求孩子	我一直想找到一个好的方法和聋哑的陆雯交流	重视每一孩子的发展需求		师生关系/教育观
26 . 自我满足感	以前我是在别人肯定中得到自我满足；现在是战胜了挑战之后的自我满足，看到孩子开心笑脸和变化的满足；我现在的快乐满足感来自于孩子的改变；	自我意识的变化		
27 . 思维方式	思维比以前开阔，多元化，发现自己内心深处每一个细微变化，及时调整完善自己；			反思能力/模糊境界容忍度
	现在我在写周记时会有许多为什么冒出来，有自己想法了，能够想办法去解决问题了；			
28 . 教学调整	原来老师安排好教什么，孩子就要听老师的，不认真听老师讲的，就是不听话的，	采纳李萍的 2006 年 2 月 27 日的观察		教育观

	要批评的，严重的还要惩罚。		
29. 惩罚	原来，老师认为孩子服错误就要惩罚，会用严厉的语调和语言，很伤孩子的。	建立常规，有责任的社会人	教育观 Positive guidance vs. traditional discipline
30. 给孩子选择机会做决定	让孩子一起讨论，决定要如何做才能保证我们有一个安全的教室，一起制定规则，一起监督执行	建立常规，有责任的社会人； 尊重孩子的想法；信任孩子的想法	教育观 Positive guidance vs. traditional discipline
31. 支持	基金会培训老师给我不断的支持和鼓励，使我坚持了下来； 每次碰到困难，都会在网上和其他老师交流，感到大家庭的温暖； 有困难，我们几个老师一起讨论，找出解决办法，比原来的工作环境要快乐多了。每次都会有老师鼓励我，我感觉自己越来越能干了。		
32. 听话的孩子	我原来要孩子听话，觉得这是好孩子的标准； 总是和孩子说：要听老师话； 不希望孩子和自己顶嘴，顶嘴会非常生气，会发火，觉得自己的孩子不如别的孩子听话。		

Appendix 7

Mean scores for each participant on the three measures

Participants	Teacher Efficacy		Tolerance of Ambiguity		Constructivist Beliefs	
	pretest	posttest	pretest	posttest	pretest	posttest
1	2.90	2.85	4.41	3.95	2.83	2.89
2	2.95	2.85	5.09	4.18	3.00	3.28
3	3.10	3.10	3.32	3.59	3.06	3.28
4	2.85	3.30	5.32	5.23	3.11	3.17
5	3.00	2.95	5.59	5.73	3.22	3.22
6	2.55	2.90	3.73	4.09	2.89	2.72
7	3.15	3.05	3.77	4.77	3.00	3.22
8	3.25	2.80	5.27	5.23	2.83	3.28
9	2.80	3.05	5.23	5.64	2.89	3.39
10	2.80	2.70	4.50	4.64	2.78	3.22
11	3.10	2.95	5.09	5.36	3.06	3.22
12	2.75	2.95	4.73	4.91	3.11	3.11
13	2.75	3.05	4.91	5.23	3.39	3.22
14	2.45	2.75	5.91	5.55	2.83	2.83
15	3.15	3.15	4.77	5.41	3.11	3.28
16	2.80	3.10	5.14	5.86	2.89	3.17
17	3.05	3.30	5.36	5.64	3.11	3.11
18	2.95	3.20	4.59	4.68	3.17	3.11
19	2.80	3.50	4.64	6.27	3.06	3.33
20	3.05	3.45	3.68	6.14	3.06	3.61

Appendix 8

Mean scores of each item on the measure of Teacher Efficacy

Teacher Efficacy

	Pre- test	Post- test
1. The amount a child can learn is primarily related to family background.	2.75	3
2. I can successfully guide even the most difficult children.	2.8	2.05
3. I can effectively include children with special needs in classroom activities.	3.05	3.05
4. Gifted children and their parents can be intimidating to teachers.	2.9	2.05
5. When a child learns something better than he or she normally learns, many times I is because I exerted extra effort.	2.3	2.55
6. The hours in my class or program have little influence on children compared to the influence of their home environment.	3.1	3.3
7. If children do not receive guidance at home, they aren't likely to accept any guidance.	2.7	3.5
8. When a child is having difficulty with a task, I am usually able to adjust it to his or her developmental level.	3.05	3.3
9. A teacher is very limited in what he or she can achieve because a child's home environment is a large influence on his	2.85	3.15
10. When a child performs at a higher developmental level for his or her age, it is usually because I have found better ways of working with that child.	3	3
11. I can offer culturally appropriate learning experiences to children from diverse backgrounds.	2.95	2.95
12. When children improve their ways of working with materials, it is usually because I found more effective ways of facilitating their learning.	3.25	3.5
13. If parents would do more with their children, I could do more.	2	3.5
14. If a child gets frustrated interacting in a learning situation, I know how to intervene to help him or her feel successful.	3.15	3.3
15. I have the ability to positively negotiate differences I have with parents and children from different ethnic, economic, and cultural Background.	3.3	2.85
16. If a child in my class becomes disruptive and noisy, I feel assured that I know some strategies for dealing with the situation.	3.05	3.1
17. Positive experiences at school can make up for negative experiences outside school.	2.8	3
18. A child is not successful completing a learning experience, I would be able to provide appropriate alternatives to help that child.	3.05	3.25
19. Even a teacher with good teaching abilities may not reach many children.	2.35	2.25
20. Child learns something thoroughly, this might be because I was able to teach him or her effectively.	2.95	3.05

1=Strongly disagree ("For the most part, no");

2=Disagree but with major qualifications ("No, but ...");

3=Agree but with major qualifications ("Yes, but ...");

4=Strongly agree ("For the most part, yes")

Appendix 9

Mean scores of each item on the measure of Tolerance of Ambiguity

Tolerance of Ambiguity	Pre- test	Post- test
1. I don't tolerate ambiguous situations well.	3.85	3.90
2. I find it difficult to respond when faced with an unexpected event.	4.60	4.85
3. I don't think new situations are any more threatening than familiar situations.	5.40	5.65
4. I am drawn to situations which can be interpreted in more than one way.	6.20	6.70
5. I would rather avoid solving a problem that must be viewed from several different perspectives.	5.40	5.65
6. I try to avoid situations which are ambiguous.	4.15	4.75
7. I am good at managing unpredictable situations.	4.35	4.25
8. I prefer familiar situations to new ones.	4.10	4.80
9. Problems which cannot be considered from just one point of view are a little threatening.	4.30	5.20
10. I avoid situations which are too complicated for me to easily understand.	4.70	4.75
11. I am tolerant of ambiguous situations.	5.30	5.45
12. I enjoy tackling problems which are complex enough to be ambiguous.	4.70	4.35
13. I try to avoid problems which don't seem to have only one "best" solution.	4.55	5.35
14. I often find myself looking for something new, rather than trying to hold things constant in my life.	5.90	5.85
15. I generally prefer novelty over familiarity.	5.90	6.20
16. I dislike ambiguous situations.	2.75	3.95
17. Some problems are so complex that just trying to understand them is fun.	5.35	5.80
18. I have little trouble coping with unexpected events.	4.50	4.65
19. I pursue problem situations which are so complex some people call them "mind boggling."	4.70	4.50
20. I find it hard to make a choice when the outcome is uncertain.	3.80	4.70
21. I enjoy an occasional surprise.	6.25	6.75
22. I prefer a situation in which there is some ambiguity.	3.80	4.25

1=Almost totally disagree ("For the most part, no"); 2=Mostly disagree ("No, with some minor qualifications ..."); 3=Slightly disagree ("No, but with major qualifications ..."); 4=Neither agree nor disagree ("My areas of agreement and disagreement are about equal"); 5=Slightly agree ("Yes, but with major qualifications ..."); 6=Mostly agree ("Yes, with some minor qualifications ..."); 7=Almost totally agree ("For the most part, yes")

Appendix 10

Mean scores of each item on the measure of Constructivist Beliefs

Constructivist Beliefs	Pretest- test	Post- test
1. I like the environment with full of high quality materials and those materials have been tested by predecessors very effective.	2.15	2.75
2. I like the environment that can provide opportunity for children to create or organize materials to make structure and perform.	3.75	4.00
3. I like the environment that can help children focus on searching of materials.	3.40	3.15
4. Parents should be totally involved in the class curriculum plan, financial budget, human resources management.	2.20	2.25
5. Parents should provide their feedback on the projects, and participate in the parenting committee.	3.45	3.80
6. Parents should assist on teaching if necessary. For example, they can join in students to make a on-the-spot investigation, to plan, to raise money, etc.	3.85	3.20
7. Children learn problem solving study questions among peers' interactions by themselves. They do not need to get the correct answers from teachers.	2.25	2.55
8. Children learn from designing personal goals and then practicing them independently.	3.15	2.95
9. Children learn from finishing a series of simple procedures in order to make fewer mistakes.	2.35	3.25
10. Adults observe and help each child based on his or her study goals.	3.20	3.75
11. Adults set up the study goals for children every school day; they should make plans to help children learning.	2.50	3.55
12. Adults provide opportunities for children to bring them into close study groups. Children will make their study plans by themselves.	3.25	3.80
13. Children learn how to cooperate with others by role playing that is related to other children.	3.60	3.55
14. Children learn social behaviors from observing the models of other children.	3.60	3.15
15. Children can learn the most by participating in small group discussions and negotiations.	3.50	3.75
16. I learn the most when I follow other people successful experience and get the help from experts.	1.70	1.65
17. I learn the most when I work with others.	3.20	3.20
18. I learn the most when I work myself and find a way to solve the problems independently.	3.25	3.00

1=strongly disagree; 2=generally disagree but it is partly correct (disagree, but...);

3=generally agree but partly incorrect (agree, but...); 4=strongly agree