

Background paper prepared for the
Education for All Global Monitoring Report 2007
Strong foundations: early childhood care and education

Selected issues concerning early childhood care and education in China

Carl Corter, Zeenat Janmohammed
Jing Zhang, Jane Bertrand
2006

This paper was commissioned by the Education for All Global Monitoring Report as background information to assist in drafting the 2007 report. It has not been edited by the team. The views and opinions expressed in this paper are those of the author(s) and should not be attributed to the EFA Global Monitoring Report or to UNESCO. The papers can be cited with the following reference: "Paper commissioned for the EFA Global Monitoring Report 2007, Strong foundations: early childhood care and education". For further information, please contact efareport@unesco.org

1. Background

This report is intended to examine qualitative aspects of ECCE programs and state services in China and the extent to which they are, in reality, benefiting the development and learning of young children. The report aims to go beyond the broad figures and officially authorized depictions of ECCE provisions in the PRC. It examines issues of access and indicators of quality and variations across socio-demographic dimensions such as rural-urban, economic level, and gender. The methodology for the report included a literature review and contacts with scholars and officials inside and outside the PRC who have worked on research and development on ECCE in China (see Appendix 1).

1.1 Overview and Contemporary Context

China has made great strides in building the public and political profile of ECCE and in boosting general levels of participation over the last two decades. Nationally, well over a third of preschoolers participate in formal center-based programs. China has developed a countrywide ECCE policy context that lays out progressive principles and complex management structures for nurseries (0 to 3), kindergartens (3-6) preprimary classes (5 to 6) and a variety of other forms of child and parent education. The general principles of the ECCE policy reflect progressive, child-centered curriculum, blended with some traditional cultural emphases and recognition of the importance of evaluation. In the management structures, the central government develops general policies and the implementation and detailed planning are pushed out through provincial and municipal governments to the local level with significant support from NGO's such as the All-China Women's Federation. The Education Ministry and education departments have the lead role but other ministries, such as Public Health, are charged with contributing to the operational aspects of the services. Provision of formal programs ranges from local government center, to work place-based, to privately-run. Beyond the core programs of nursery, kindergarten, and pre-primary programs, there is a variety of less formal programs for children and for parent education. Funding comes from a variety of sources, including parent fees, as the "Socialist Market" approach has grown over the last decade (Wong & Pang, 2002; Zhu & Wang, 2005).

The promulgation of policy has helped to give early childhood a prominent place in the society's educational and economic aspirations. Parents have bought into the policy vision- often literally by paying for quality kindergarten programs and other services when they can afford it. Social change has reinforced the interest and the policy. Declining numbers of preschoolers resulting from the one-child policy permit greater investment in the care and education of individual children by families. Greater participation in the global economy gives some families and regions more resources to invest in ECCE. It also feeds utilitarian aims of parents and the state in making the investment (see Ross, 2004) since kindergarten is seen as the base for education, which in turn is seen as the foundation for economic and social success. Child-centered curriculum with respect for children is reinforced by the focus on single children in families, as well as by the UN Charter of Rights for children. Rapid social and economic change also leads to social dislocations. Migrant and ethnic-minority parents may bring young children to urban areas where they are less likely than "native" children to access services. Or migrant parents leave their young children behind to be cared for by grandparents or other relatives. The push for kindergarten in well-off urban areas may also lead to family separations as parents choose to place their children in kindergarten boarding schools, accounting for approximately 10% of kindergarten enrolments.

Evidence of progress is found in broad figures that show increases in the proportion of children accessing kindergarten over the last decade, as well as in relative equality in service access by girls and boys. However, regional and socioeconomic disparities in access to and quality of ECCE services are widely acknowledged and gender equality may not apply in all areas. Policy implementation and quality monitoring appear to be a patchwork at the local level. Further progress towards making ECCE a base for EFA will require action-oriented efforts and actual funding mechanisms to address these issues. Although policy includes plans to reduce regional disparities, it may also instantiate them by posting lower targets for quality (staffing levels), for access, and for formal center-based provision (as compared to other forms such as informal programs and parent education) in less developed regions.

The great societal interest in Kindergarten does not appear to be matched by interest in child care or Nurseries for 0 to 3. Policy development for nurseries and academic analysis is relatively thin compared to the recent boom for kindergarten. This suggests that the societal interest in ECCE is not yet a bottom-up vision for child development but rather a push-down

rung on the ladder of educational success (see Soo-Hyang Choi, 2006). In this respect, China may be no different than many western nations.

1.1 Historical context

Similar to other countries, China's experiences in childhood education have been influenced by the social and educational philosophical frameworks imported from other countries including the early influences of the reform movement of 1898 and the missionary activities of imperialist powers, stimulating the modernization of cultural and educational institutions. The first regulations regarding preschool education were introduced in 1903 based on Japanese training institutions. (Zhenghao, 1993) The earliest kindergarten training was instituted in 1899 and the first public kindergartens were created in 1903 when 20 kindergartens teachers were brought to China from Japan, where Froebelian kindergartens had been established by American missionaries. (Spodek, 1989) Following the 1911 revolution and after World War 1, the Chinese resisted Japanese influences in educational and cultural affairs and looked more toward American and European models of preschool education until the founding of the People's Republic of China in 1949 (Spodek, 1989; Zhenghao, 1993). However, leading Chinese early educators, such as Tao Xingzhi (1891-1946) also put a Chinese cast on developing kindergartens (Shi, 1989). Tao believed that kindergarten should serve the common people and that kindergarten was the foundation for primary education, which in turn was the basis for country-building. He believed kindergartens could build good habits and attitudes to insure later success,

Since the founding of the PRC in 1949, the educational forces have reflected the national agenda of love for country, people, labour, science and public property, in addition to the ancient Chinese virtues of hard work, bravery, respect and care for others. (McLoughlin, Pang, & Dong, 1997) The overall administration of ECCE has been located in the Ministry of Education with corresponding provincial, municipal and regional bureaus. The Ministry of Health has been more responsible for the nursery school programs with different educational and health policies. During the mid-50's preschool education training was added to regional universities and preschool development grew steadily) During the next stage of political history, preschool education experienced tremendous growth and by 1960 there were over 784, 000 kindergartens in China although the quality of programs was eroded due to a focus on group expectations guided by teacher

directed programs. For example, fostering play was viewed as overly focused on individual interests and was perceived to promote disorder. (McLoughlin et al., 1997)

During the Cultural Revolution, schools were closed and early childhood education also came under serious attack. The goals of preschool education were realigned so as to inculcate revolutionary fervor including the practice of military drills, the memorization of poems and quotations by Chairman Mao and almost all the teachers were displaced or forced to find other employment. The year 1979 was in many ways a turning point for early education with a national conference on nursery and kindergarten education held in Beijing. The purpose of the conference included developing a coordinated effort on the transition between nursery and kindergarten. It also aimed to resolve the funding base including low teacher salaries, provide support to local infrastructure and establish more qualified teachers and improve the health of nursery and kindergarten children. This conference led the Ministry of Education to establish a nationally endorsed set of preschool teaching activities including physical activities, mathematics, language, social knowledge, music and art. Despite the progressive changes stemming from this watershed, learning continues through more large group activity and in a more structured way than is typical of western ECCE programs (McLoughlin et al., 1997). To this day, learning in Chinese early childhood settings are based on these national principles but they have been supplemented by a variety of more recent policy documents as described below.

1.2 Contemporary Policy Context

In 1989 Regulations for Kindergartens laid down principles that consolidated progressive influences in the 1980's (Zhu & Wang, 2005). These included a focus on child development, integrated curriculum, active learning, attention to individual differences, group functioning, and respectful relationships between teacher and child. However, over the next decade it became clear that progressive principles sometimes bumped into more traditional practices and implementation was a problem. To help solve this problem the Ministry of Education issued the 2001 Guidelines for Kindergarten Education (trial basis) to provide guidance on how progressive ideas could be bridged into practice. For example, the Guidelines call for evaluation as an important part of quality education but the principles for evaluation are progressive and concrete means are suggested for achieving

the progressive aims. Evaluation of children should be holistic and cover all aspects of development. It should recognize individual differences. It should be collaborative and engage parents, other staff as well as the children themselves. The concrete means to carry out evaluation include interviews and direct observation. Evaluation is not limited to children but includes the teacher as well.

An instructive policy document from the China State Council in 2003 transmitted “Opinions from the Department (Units) including the Ministry of Education on innovations and development of early childhood education.” This document on the reform and development of ECCE shows that the scope of interest extends well beyond the 2001 Guidelines for Kindergarten Education (trial basis). It projects a management plan for the five years to 2007. As usual, the policy is centrally generated and national but places responsibility for implementation at the provincial, regional and local levels. The diversity of the units offering a unified set of opinions is remarkable; it includes a half dozen ministries of government led by Education (with Civil Affairs, Finance, Labor and Security, Construction and Public Health) along with an office of the Central Committee, the State Council Working Committee for Women and Children, and the All-China Women’s Federation. The document extols flexible methods of dealing with regional and urban rural disparities. It calls for blending parental supports with more formal services to “provide child-care and educational services at an early stage for children aged 0-6 and their parents.” (p. 2). Although it calls for “exploring all avenues” to offer services, it sees “state-run kindergartens as the backbone and exemplar”, to be fleshed out with civilian run, regular and irregular provision. It admonishes governments from provincial to municipal to county to take charge and fulfill their responsibilities. It expects governments and education departments to put “real teeth” into enforcement of policies and principles. At the same time it cautions that “evaluation should be simplified and cost-effective, without interfering with the routine work of local government and kindergartens.” Although the document does not speak to curriculum, it mentions that part of the duties of governments, departments and early childhood services is to promulgate and utilize scientific research on early childhood education and to raise its profile.

On the less progressive side, it perpetuates a two-tier system of regional disparities by adjusting the five-year plan to “local conditions”. In cities and developed areas, the preschool target is that 90% of children will receive education three years ahead of school age (e.g., kindergarten from 3 to 6) but

in less developed areas, the target is 35%. Perhaps this is progressive “realism” in the eyes of the planners, along with the hope that “scientific” parent education will help fill in the gaps for all children aged 0 to 6.

The fact that diverse central bodies were able to come together on this plan is a sign that the profile of ECCE has moved quite high in China. On the other hand, agreement on policy and principles is no doubt easier when other levels of the society are charged with the issues of implementing, funding, and enforcing. To illustrate the problems of putting policy into practice, who will ensure the “real teeth” are put into enforcement at the local level? How will implementation and outcomes for children be monitored in consistent fashion?

1.4 ECCE in China through the lens of big numbers

The nationwide picture of ECCE services in China is detailed in a case study report published by UNESCO’s Beijing office in 2003 (UNESCO, 2003b) with data reported up to 2001. This report gives a global picture of the reach of formal services to China’s 130 million children between birth and age 6 years. It is reported that approximately 20 million children are in nurseries serving 0 to 3 and another 20 million in kindergartens serving 3 to 6. Nearly 10 million children are in preprimary classes serving 5 to 6 (and some 7 year olds). This yields a generous estimate of roughly 38.5% of children birth to six in formal ECCE arrangements. [UNESCO Institute for Statistics data for 2002/2003 for 4 to 6 year old provide a figure of 36.4% gross enrolment (UNESCO, undated); Zhu & Wang, (2005) report a figure of 45% for the same age range in 2002; Quinghua, Yan, Yan, & Qiaong (2005), report that 37.4% of children in low income Beijing families have attended nursery] In addition to these “backbone” formal services, a variety of other services, particularly parent education programs, flesh out the educational picture, although these are listed without participation data. These services include: play groups, parent-child centers, seasonal and weekend classes, home tutoring, covered truck/mobile counseling centers, and child welfare programs. Although participation data not available, women’s federations had set up 320,000 parents’ schools of various descriptions. This astounding figure is based on a collaborative National Family Education Program sponsored by the MOE and the All China Women’s Federation. Aside from the 20 million figures for nursery enrolment noted above, other national data on children in nurseries 0 to 3 are “not available”.

Updated tables from the UNESCO report, with more detailed data to 2003, are in Appendix 2. Table 1 shows number of kindergartens (schools), kindergarten and pre-primary classes, and kindergarten and preprimary enrolments nationwide from 1995 to 2003. Table 2 shows the number of kindergartens and kindergarten enrolments for Urban and Rural regions.

These data show continuing decreases in total enrolments for kindergarten and preprimary classes across the period 1995 to 2003, tied to the declining birth rate. The number of kindergartens also decreased across the period, particularly in the five-year period from 1999 to 2003 with a percentage decline of 36%. Enrolments also decreased in the same period but not by the same percentage. Interestingly enrolment decreased more in preprimary (24%) than in kindergarten (14%), a possible indication of the greater popularity of kindergarten, at least in urban areas. The differential between the decreases in number of kindergartens and in enrolments suggests that, on average, the size of kindergarten schools increased during this period.

It is also instructive to examine the declining numbers of kindergartens and enrolments in term of differences in these figures for urban and rural areas. In urban areas, the number of kindergartens declined by 14% and enrolment by 6%. In rural areas, the number of kindergartens declined by 51% and the enrolment by 25%. Unless there was a substantially greater decline in the base population of 3 to 6 year olds in the rural areas, these gross figures suggest that the gap between urban and rural access to kindergarten is widening.

In addition to numbers on kindergarten schools, classes, and students, there are also national data on teachers and other staff members. Education reform at all levels has worked on building the teacher workforce and ECCE is no exception. Recognition of the centrality of teacher development for educational improvement is a key tenet of China's educational reform efforts at all levels in the Chinese State Council Action Plan for Rejuvenating Education 2003-2007 (Chinese National Commission for UNESCO, 2004) Table 3 in Appendix 3 shows qualifications of teachers and principals in kindergarten. According to 2002 data, there were 903,319 kindergarten teachers, staff, and workers in the whole country (not including substitute teachers and part-time teachers), of which 53% are graduates of pre-school education programmes. There were 76,040 substitute teachers and part-time teachers, of which 43% are graduates of pre-school education programmes. Sixty-nine percent of principals and full-time teachers are graduates of pre-

school education programmes. There were 659,268 kindergarten teachers (only including full-time teachers and principals) in the whole country, of which 2.9% have an undergraduate degree, 34% have an associate bachelor (college diploma), 57% are graduates of high school, and 6% are below high school graduate. Table 4 shows that are substantial numbers of staff in kindergartens who are not teachers and who do not have ECCE training. Figure 1 shows that there are disparities in level of teacher qualifications between rural and urban areas. For example, 43% of full-time teachers or principals in urban areas have an associate bachelor degree and 45% of them are high school graduates. In the rural areas, only 20% of full-time teachers or principals have an associate bachelor degree and 67% of them are high school graduates.

2. International research on the determinants and outcomes of ECCE: A framework on Quality and applications to China

It is useful to place the analysis of China's progress in ECCE in broader context. International research findings point to key design elements that are common to effective ECCE programs that are offered in formal settings. Concepts of quality vary across countries and according to the priorities of various stakeholder groups (OECD, 2001). Multiple perspectives on quality are based in differing assumptions about childhood, the purpose of ECCE programs and childrearing practices. However, there is considerable agreement that certain elements contribute to children's short- and long-term outcomes.

A prime conclusion from research in western countries, is that "process quality" (i.e., a composite measure of interactions and environment in the early childhood setting) is the key factor that determines child care's effects on all domains of children's development (Cleveland, Corter, Pelletier, et al., 2006). "Structural quality" factors, such as caregiver education and ECCE training, staff-child ratio and group size, are key determinants of process quality (Ruopp et al., 1979; Vandell, 2004). In fact, the findings on the importance of these structural factors are so robust they have been called the "iron triangle" of quality indicators. In addition to these, other potential quality indicators from the international research are discussed below and applied to the Chinese context where possible.

2.1 Group Size and Ratios

Research on these determinants, mainly from U.S. studies has consistently confirmed the benefits of smaller groups in both family child care and centre care (e.g., Clarke-Stewart & Allhusen, 2005). The research findings on caregiver/child ratio (distinct in centre care from group size) are mixed for preschoolers (e.g., Howes & Rubenstein, 1985; Clarke-Stewart & Allhusen, 2005), with the importance of ratios for infants and toddlers being reaffirmed.

In China, information on group sizes and ratios is limited. Zhu and Wang (2005) report typical kindergarten class sizes of 25, 30, and 35 across the 3 to 6 age span, with two teachers and an aide. However, in rural kindergartens, class sizes are reported to be larger and there may be only one teacher. These figures suggest that whole group instruction may be the norm in many kindergarten classes, rather than the active-learning, child-centred approach espoused in curriculum documents. For nurseries, there is also a lack of systematic information on group size and ratios. In a somewhat dated survey Zhengao (1993) reported that in Beijing, maximum group size for infants and toddlers was 15 with an adult-child ratio of 1:4 or 5.

2.2 Staffing

The quality of ECCE programs is determined by the characteristics of the interactions between individual children and the staff, the knowledge and skill staff have acquired, and an environment that is created by the staff (NICHD, 2000; National Research Council, 2001)~. A recent review of American research concludes that investment in the human resources related to ECCE programs is necessary to improve program quality and child outcomes (Love, Schobert, & Meckstroth, 2002).

The introduction and expansion of ECCE programs in developing countries need human resource strategies to ensure staffing is adequate. Further research is needed to understand the evidence from North American studies in the context of programs in developing countries. However all of the evidence to date suggests that human resource development efforts will need to be intensive and ongoing.

In China, real advances have been made in the training of new teachers with the expansion of new training programs in higher education (Zhu & Wang, 2005; Wong & Pang, 2002).

2.3 Training

Numerous research studies and policy documents report consistent and significant associations between higher staff education levels, quality programs, and better outcomes for children (Barnett, 2001; Cleveland & Krashinsky, 2001; National Research Council, 2001). Several recent American studies recommend increased qualifications for the child care workforce and conclude that at least some of the staff in centre-based programs should have university degrees with focus on early child development studies (Barnett 2001; Cleveland & Krashinsky, 2001; Cleveland & Krashinsky, 1998).

A comparative analysis of early childhood education and care in twelve OECD countries identifies the training of a competent early childhood workforce as a common challenge. Most staff who are working with children three and older have three year university level degrees in early childhood studies (OECD, 2001).

Much of the research evidence is from studies conducted in developed countries but findings are similar in a number of small studies in developing countries. Training for staff working in ECCE initiatives is a challenge and often not available. One of the largest ECCE initiatives in the developing world is the Integrated Child Development Services in India. The community program leaders are not trained and do not have access to ongoing mentoring or information about early development and pedagogical practices (South Asia Sector, The World Bank, 2003). A recent review of small studies and large-scale child development interventions (including several in developing countries) reports that increased staff development and training improved the quality of programs (Young, 2002). In-service training and supports can enable local residents to become competent early childhood staff while ensuring culturally appropriate curriculum (Bartlett, Arnold, & Sapkota, 2003; Jaramillo & Tietjen, 2001).

In China, the training of day care staff is determined by availability, according to Lee (1992). Larger cities like Beijing and Shanghai, offer institutes in child care training include prescribed curriculum, textbooks and course content. With the shift toward including education for young children, there has been emphasis on teacher directed learning in painting, music, physical exercise and language acquisition and knowledge in sciences. Environments and attitudes of caregivers have changed positively

and there is greater value placed on early education. However, without a systematic approach to training all daycare staff, early education is not seen as a profession. The benefits have included a warmer response from caregivers where they are more interactive and respectful of children. The former “three waiting” problems – waiting to eat, waiting to sleep and waiting to go home have disappeared with a corresponding change in the children and their apparent enjoyment of day care.

In China the expansion of teacher education into higher education has increased the number of highly qualified teachers. However, there is no evaluation process found on the quality of teacher training programs. Staff are assessed, classified into ranks and remunerated based on their professional title. (Wong & Pang 2002). Despite the successful expansion of training, Zhu & Wang (2005) point to a number of weaknesses in preservice training. These include insufficient time in practice teaching, faculty supervisors without kindergarten experience, and a lack of training institutions in rural areas. They also point out that teachers who have been in the workforce for a longer time tend to be less well educated, which presents problems for inservice education to help teachers deal with new curriculum. From another standpoint, Wong and Pang (2003) argue that inservice training for the new curriculum is inadequate, since it is more informational and divorced from practice.

2.4 Supervision

International research findings point to the ECCE manager, supervisor or director as the gate-keeper of quality (National Research Council, 2001; Goelman, et al., 2000)~. The education and training of ECCE managers influences ECCE quality. Managers who have higher educational levels seem to be better able to provide curriculum and pedagogical leadership to front-line staff. Overall, there seems to be a gap in the abilities of ECCE managers to implement good human resource practices that can help to support, train and retain staff.

2.5 Curriculum

In a narrow sense, curriculum is the content, materials, activities and interactions of ECCE programs. Curriculum can be a prepared package of materials and activities that are applied within a program or it can be generated by the local community (known as a generative curriculum-Evans,

Myers, & Ifield, 2000). In a broader sense a “curriculum framework” includes: orienting principles, programme standards, content outcomes, and pedagogical guidelines on processes by which outcomes are achieved (Bennett, 2004).

According to research to date, there is no one “best” ECCE curriculum (Evans, Myers, & Ifield, 2000) but having a specific child-focused curriculum is important to support child development goals (South Asia Education Sector, The World Bank, 2003). Young children are more likely to acquire new skills and abilities when materials and activities are tied to the local culture that is part of their daily lives (Bartlett, Arnold, & Sapkota 2003; Evans, Myers, & Ifield 2000). However, there is some tension between frameworks that espouse these child development goals and those that emphasize skill development (Bennett, 2004).

In China, ECCE curriculum policies and principles do not appear to have a specific focus on literacy skills (Li & Rao, 2005) nor do they deal with how to program for minority languages, a huge issue for literacy education across the life span (Ross, 2004). Literacy is a focus in EC provision across countries in the OECD and the focus includes parents as partners in children’s learning outside of formal programs (Bennett, 2004). However in China there are echoes of maturationist perspectives where programs are meant to build “interest” in reading (China MOE, 2001) while waiting for skills to emerge on the child’s internal timetable. Li & Rao (2005) suggest that this is a potential weakness that might account for the lower literacy performance of Beijing Kindergartners in their study as compared to those from Singapore and Hong Kong. Similarly, Helen Penn (2002) characterizes China’s curriculum policy as DAP (Developmentally Appropriate Practice, from the U.S. National Association for Education of Young Children) without monitoring and suggests that it might not benefit children as much as other curricula.

2.6 Pedagogy

Pedagogy is the method of delivering the curriculum and the processes by which outcomes are achieved. In general ECCE programs in the developing world are adopting more child-centred approaches, which are supported by a recent report of early childhood education and care in OECD countries (Myers, 2002; OECD, 2001). Similar developments are noted in many

developing countries where there is evidence of a shift to active learning models (Myers, 2002).

A recent review of large and small-scale studies investigated the impact of preschool education on later reading achievements and other outcomes for disadvantaged American children (Barnett, 2001). Overall, preschool education is found to improve general cognitive abilities and later reading achievement. Some approaches are more effective than others: home-based initiatives are the least effective while intensive educational child care was the most effective. The pedagogical approach in the most effective programs was child centred and guided by clear curriculum goals and objectives. A recent review of small studies and large-scale child development interventions (including several in developing countries) reports that increased staff development and training improved the quality of programs (Young, 2002).

2.7 Regulation

A regulatory framework for ECCE programs usually establishes a licensing process that is, in most instances, a function of a government agency (Olmsted, Weikart, & Montie, 2001). When resources are scarce it is more effective to concentrate regulations on safety conditions and assistance to centres to improve conditions rather than impose impossible standards that lead to avoidance altogether. Licensing is more effective if programs are supervised on a regular basis. While regulations ‘set the stage’ for quality, they need to be supplemented with other approaches and support.

In many developed countries, governments are moving away from day-to-day management of compliance with regulations (OECD, 2001). Traditional inspectors are replaced with pedagogical advisors who work alongside staff and parents to support effective practices and promote quality.

China appears to have advanced policy on matters of health in both nurseries and kindergartens but the mechanisms on regulation were not spelled out in documents used in this review. Assessment of quality of the education and care provided in ECCE is a regular feature in some areas of China. For example, in many cases assessment of quality determines the fees that can be charged so service operators and parents have a deep interest in this form of market regulation. Nevertheless, Wong & Pang (2002) observe that where quality monitoring does take place, it tends to focus on the “hardware”

indicators such as materials and facilities, often neglecting the more important, but harder to measure, “process” indicators such as relationships and pedagogy. In addition, there appear to be no provision “for monitoring the monitoring”, so the nature of quality regulation or even whether it takes place on a large scale is unknown. These gaps were recognized in the advisory document issued by the China State Council (2003) on management and reform of ECE, which called for responsible governments and education departments to put “real teeth” into enforcement of policies and principles.

2.8 Auspice

ECCE programs can be operated directly by the government, by a not-for-profit organization or by an individual or corporate owner. Research findings in North America indicate that for-profit operations are less likely to deliver quality early childhood education and development programs than programs that are non-profit or directly operated by a government (Cost, Quality & Child Outcomes Study Team, 1995; Doherty, Friendly, & Forer, 2002).

In developing countries, for-profit operators have expanded the capacity for ECCE programs and can deliver quality programs that are offered on a fee-for-service basis (Olmsted, Weikart, & Montie, 2001; Evans, Myers, & Ilfeld, 2000). However, those who are less affluent and more disadvantaged are least likely to have the resources to pay for ECCE programs.

In China, auspice is pluralistic with provision by the government, government licensed private individuals or neighborhood committees, or work units (Zhu & Wang, 2005).

2.9 Access

Improving access to enable all children and families to take part in ECCE programs is a priority for developed countries (OECD, 2001) and in developing countries seeking to meet Education for All goals (World Bank, 2000; Myers, 2002). Overall access to early childhood services is unequal (Myers, 2002; Colclough, 2002). Barriers to access include the lack of availability of programs that are geographically accessible and that accommodate parents’ labour force obligations. Many ECCE programs require fee payments and are not affordable to families. There are also a host of cultural and social barriers that inhibit access to ECCE programs and can

be heightened by the importation of curriculum materials that clash with local values and customs. Many programs cannot accommodate the needs of children with disabilities.

As noted elsewhere in this report access to kindergartens has increased in China, but economic and regional disparities persist.

2.10 Availability

A review of ECD in developing countries since 1990 reports overall preschool enrolments are increasing in developing countries but the actual increases are generally small (Myers, 2002). Children living in affluent families and urban environments are more likely to attend ECD programs (Myers, 2002; South Asia Education Sector, The World Bank, 2003). Cuba is the developing country with the highest level of attendance in programs for children three to five years; it has achieved universal early childhood education. Participation in ECCE programs does increase children's participation in primary school. One report suggests that participation in ECCE programs can reduce dropping out of primary schools by 15 to 20 per cent (South Asia Education Sector, The World Bank, 2003).

2.11 Inclusion

Many of the reports and policy documents present strong recommendations and program directions that support the goal of full participation of all children in ECCE programs (e.g., Penn, 1999). Participation in ECCE programs can reduce social exclusion in later school years (Bartlett, Arnold, & Sapkota, 2003).

The recent report from the Organization for Economic Cooperation and Development identifies three distinct groups of young families and their children who will need additional supports if they are to have opportunities for full participation in early childhood programs (OECD, 2001):

- Children with special needs including those with identified developmental and physical difficulties and who require adaptations to the social and/or physical environment;
- Children who live in families who face social and economic challenges related to poverty; and

- Children and families who are newcomers to a country or who are migrants or who live in distinct cultural communities and may face linguistic and other challenges that are barriers to their full participation.

Concerns are raised that many existing ECCE programs will not or cannot provide the supports necessary to ensure that all children are able to fully participate. Children with disabilities may be turned away from ECCE programs or may have their participation limited (Alur & Rioux, 2003). Inclusion of children with special needs does not seem to happen on a consistent basis unless there is an explicit plan with implementation activities and specific indicators and benchmarks (Evans, 1998; OECD, 2001). Successful inclusion strategies include: adaptations to the physical environment and learning materials that can be made from community resources even in very disadvantaged regions; reorientation of the curriculum to accommodate children's diversity; parent education; and a shift from professional primary service in specialized settings to community settings (Alur & Rioux, 2003).

For China, we have found relatively little documentation of programs for inclusion of children who are minorities or migrants or who have special needs.

2.12 Gender Equality

Overall girls seem to be as likely to attend ECCE programs as boys (South Asia Education Sector, The World Bank, 2003; Bartlett, Arnold, & Sapkota, 2003). Even in regions where gender disparities are common for school attendance, gender equity is often found in community ECCE programs.

When girls participate in ECCE programs, participation in primary schooling increases (Bartlett, Arnold, & Sapkota, 2003). Girls' participation in early childhood education programs increases their likelihood of enrolment and grade completion in primary/basic education particularly in disadvantaged communities in developing countries.

In the big picture of enrolment patterns, ECCE in China appears to be successful in overcoming gender bias. This lack of bias in enrolment is consistent with reports at higher levels of the education system. Net enrolment rates in primary school were reported to be above 98% in 2003 (Chinese National Commission for UNESCO, 2004). In ECCE, gross

enrolment rate for children 3 to 6 years of age increased modestly between 1996 and 1997, from 39.7 to 42.7%, and GER for boys and girls was similar (Ross, 2004). Nevertheless, in a more nuanced comparison, some suggestion of gender bias was found. Short and Sun (2004) used representative sampling survey data from the China Health & Nutrition Survey (Carolina Population Center) to explore various kinds of child care arrangements, including grandmother care and formal center-based care. Although both types are viewed positively by parents, interviews revealed that center care was seen as more educational. The finding relevant to possible gender bias was that in low-income families, boys without siblings were more likely to receive more expensive (and more educational) center care. We were not able to find other systematic, disaggregated data to determine whether other localized gender disparities exist. However, this is an area for further investigation, particularly in light of documented gender inequities above the age of six. Ross (2004) found “ample evidence to show that illiteracy and lack of education are concentrated among Chinese women and girls in poor counties.

2.13 Parent Participation

The focus on parents as caregivers, learners and teachers is prevalent in the rhetoric about ECD but is often absent in actual practice (UNESCO, 1998). The actual practice often involves “telling parents what to do” rather than providing opportunities to become engaged in their children’s early development. Parents’ active engagement in early learning and development is associated with better developmental outcomes and academic achievements. Parents’ direct participation in ECCE programs can increase their engagement and amplify opportunities for early learning in the home environment.

The educational attainment of the mother seems to increase a child’s likelihood of participation in an ECCE program (Colclough, 2002). ECCE programs provide a platform to increase parents’ literacy (Evans, Myers, & Ilfeld, 2000) and may also support the mother’s ability to work outside the home. Early childhood education programs provide an entry point to engage parents in literacy programs and engage them directly in their children’s early learning. Some programs target parents and parent education directly. Research in western jurisdictions shows that not all these programs are effective in changing parents’ behaviour, or in supporting children’s development (Cleveland, Corter, Pelletier, et al., 2006).

In China, parent education appears to be the prevalent mode of involvement, often as free-standing programs that come in various forms as noted previously. These are sometimes intended to fill in gaps where formal nursery and kindergarten programs are less available, as in rural regions and poor areas. Despite the ubiquity of these programs, there appears to be little information on them or their effectiveness. They have not been a focus in the academic literature or official record keeping. In child care settings it is reported that parent education takes the form of communications from the nursery on lesson plans and child development (Lee, 1992). Similar approaches are taken in kindergarten where one-way communication from school to home appears to predominate. In fact, policy dictates that educational authorities educate parents about child development and “scientific approaches” to early care and education.

2.14 Funding

The OECD notes that substantial public investment in ECCE programs and infrastructure are necessary to promote access to quality programs, even when parents continue to pay a portion of the costs (OECD, 2001). ECCE programs require financial resources to recruit and retain staff and provide a supportive learning environment for young children.

In developing countries it is common for ECCE programs to charge fees, often on a sliding scale (Olmsted, Weikart, & Montie, 2001). Fee-for-service ECCE programs may accommodate more affluent families, but families most in need will not be able to pay the fees (Evans, Myers, & Ilfeld, 2000). Donor programs may establish ECCE programs but unless there are available community and public resources, they are not sustained once the project funding is finished (UNESCO, 1998).

2.15 Program Delivery Model

The structure and operating patterns of ECCE programs vary according to their purpose. One distinction is between those that primarily operated for the purpose of non-parental care and those that operate primarily for children’s developmental or educational purposes. Another distinction is between those that are child focused and those that are child and adult/caregiver focused (often known as two generation programs). The central purpose of an ECCE program shapes the hours of operation and

influences who is eligible or encouraged to attend. Generally speaking, ECCE programs that are educational services such as kindergarten have larger group sizes than child care settings (Olmsted, Weikart, & Montie, 2001).

In reality, ECCE programs are typically multi-purposed and specific emphasis reflects countries' political, economic and social conditions (OECD, 2001). The delivery of ECCE programs should reflect these realities and priorities (Evans, Meyers, & Ilfeld 2000; Myers, 2002).

2.16 Capacity

ECCE programs and policies require public awareness and support and a systems infrastructure that is linked and coordinated with other elements of ECD. Local, institutional and government capacity that can work together reinforce each other and create the policy and practice environment that encourage ECCE program development and expansion.

In China, the intersection of different ministries and levels of government in the ECCE enterprise, along with the “socialist market” approach and parental buy-in have created the interest and capacity to take the development further.

2.17 National Strategy

Countries that have achieved capacity for the majority of preschool children in ECCE programs have a national strategy that includes an explicit commitment and purpose, a legislative framework that ensures common standards and monitors implementation, and public delivery (OECD, 2001; UNESCO, 2003a). ECCE programs that are universal or accommodate the majority of preschool children are usually organized in one governmental authority (increasingly in education). Increased authority within one government area is usually associated with increased responsibility to ensure reasonable access and quality.

However in many countries, there is no clear national strategy that guides the operation of ECCE programs and priorities (Myers, 2002; Doherty, Friendly, & Beach, in press). ECCE programs are fragmented across several government departments and private sector operators (including not-for-profit organizations and commercial operators) who have an identity in the

delivery of ECCE programs that is difficult to shift. Cross-sectoral coordination is often not effective unless there is a national decision on the lead sector for ECCE programs (UNESCO, 2003).

In China there is a coherent national strategy with the education sector in the lead and an elaborate national policy framework. What is missing is national strategy to support implementation and population level monitoring.

2.18 Nutrition and Health

The presence of ECCE programs in local communities seems to increase rates of immunization and participation in nutrition programs (Jaramillo & Tietjen, 2001; South Asia Education Sector, The World Bank, 2003). Also, links to health and nutrition initiatives can build the capacity of ECCE programs to reach larger numbers of children. Improvements in children's nutritional status do not necessarily bring about improvement in psychosocial development (Young, 2002). However the combination of nutrition, access to health care and ECCE programs maximize child development benefits (Olmsted, Weikart, & Montie, 2001).

In practice the integration of nutrition and health programs into ECCE initiatives does not always happen. Each component may remain discrete (South Asia Education Sector, The World Bank, 2003).

In China, the elaborate policy framework includes regulations on health and participation of the Ministry of Public Health and departments in the operation of kindergartens and nurseries (UNESCO, 2003b).

2.19 Transition to School

The transition into the education system is an important one that sets long-term developmental trajectories (McCain & Mustard, 1999; Young, 2002). Children who are prepared for school learning have better academic achievements and are less likely to drop out of school (Willms, 2002).

There is evidence that ECCE programs that are attached to the education system and local primary schools are more effective (South Asia Education Sector, The World Bank, 2003). They are more likely to have a pedagogical approach that is consistent with the primarily school curriculum.

In China, the transition from ECCE to primary school was the focus of major study (Zhu, 1995, cited in Wong & Pang, 2002). The study documented difficulties in children's transitions and attributed much of the problem to the change in activities and demands on children as they moved in the less child-centred and more subject- and exam-oriented primary schools. The conclusion was that the gap in pedagogical approaches and activities should be reduced.

Another form of transition is from child care to kindergarten. Wong & Pang (2002) note budding moves to integrate these services.

2.20 Monitoring and Measurement

ECCE reporting from developing countries mostly concentrates on health status reports and some indications of participation and program quality. There are few reported measures of developmental level or learning abilities apart from small program reports and reports from systematic monitoring of national changes in children's development and learning from birth into the school years (Myers, 2002).

The expansion of ECD in developing and developed countries is creating a demand for data collection and information systems that are capable of tracking enrollment, attendance and capacity with multiple groups delivering the programs (OECD, 2001; Olmsted, 2002).

Acceptable, meaningful indicators of child development and early learning are essential to monitoring the success of ECCE projects and programs (Consultative Group on Early Childhood Care and Development, 2001). Specific policy goals should be the basis for selecting what outcomes to measure (Olmsted, 2002). In particular there is a need for a monitoring strategy that includes measures of children's development at entry to primary schooling in a cost-efficient manner (Myers, 2002; Olmsted, 2002). Such a strategy would be a valuable tool to track the effectiveness of large scale ECCE programs and provide feedback needed to make good investments (Willms, 2002; Young, 2002). It is possible to link measures of early child development with later measures of academic achievement in the school system to gain a better understanding of developmental trajectories and effect of programs and resource allocation (Willms, 2002).

The Education for All Global Monitoring Report (Colclough, 2000) analyses the world's progress towards the six Dakar Education For All goals. The report notes that early childhood care and education data and indicators are sparse and limit policy development and the assessment of global progress. The diversity of the provision of early childhood care and education programs compounds the challenge.

In China, evaluation is a prominent part of the 2001 Kindergarten Education Guideline (China Ministry of Education, 2001). However, local evaluations do not seem to make their way into broader population perspectives on how children, schools, communities and regions are doing.

3. Explanations for variations in ECCE quality and access in China

The foregoing comparisons of China's situation with international findings suggest a number of explanations for variations in ECCE quality and access. These range across central policy, decentralized decision-making limited resources, uneven quality standards and lack of monitoring. Although China has a coherent national strategy for ECCE with the education in the lead and clear instrumental aims for economic development, it does not have the same coherent aims for equity. Although it also has an elaborate national policy framework, it is missing a national strategy to support implementation, population level monitoring, and addressing inequities. The latter set of issues is explored in the following section.

4. Issues of Affordability, Access and Quality

As early as 1956, the Ministry of Education recognized that "there will be more women joining work and in order to help working mothers take care of and educate their children, nurseries and kindergartens should be developed." (Zhenghao, pp. 89) The IEA project in China found that close to 98% of mothers are in the paid labour force although these figures vary in rural communities. (Olmstead & Weikart, 1994) The introduction of the national family planning policy such as the one child policy was introduced to reduce the population in the People's Republic of China. Regulations for the development and delivery of preschool services is the responsibility of the Ministry of Education and the Ministry of Public Health and often, the level of quality is linked to the cost of care because of improved salaries, better trained staff and positive environments. The government Pricing Bureau allowed for increase in fees for higher quality programs to motivate increase in quality. However, this standard excludes children in low-income

families who are only able to access low quality, low cost programs. Kindergarten programs are better attended than preschool programs due to more access with national guidelines as opposed to ECCE guidelines that are established by local communities who have the autonomy to set their own plans. With various local departments such as public health, planning, finance and labour share the responsibilities for administration access to quality early childhood programs are further limited by a disjointed management approach. With the late 1980's shift to local government and introduction of private ECD programs, further erosion of access to public services. (Wong and Pang, 2002) Further, urban communities are better served than rural communities, which tend to be operated, by villages, townships or counties. Seasonal fluctuations with relatively simple program and not well-educated staff make it difficult to offer high quality programs. (Lee, 1992, p. 367) In fact, the IEA Preprimary project found that it was common for 4-year-old children in rural China to spend close to 4 hours per day without adult supervision due to the nature of rural work and assumed safety of children. (Olmstead & Weikart, 1994, p. 208) Research conducted by the Rand Corporation on the availability of child care centres in China found that child care centres may be located where there is a particularly high demand for child care and rich communities are likely to have private child care and public programs may be more commonly found in poorer communities. (Kilburn, 2002, p. 12 – 19) Interestingly, the study also found that families with more household assets such as bicycles, appliances etc. tend to use more centre based care. (p. 30) The study findings suggest that the Chinese government's expansion of child care centre availability was effective in realizing its objective of promoting mother's labour force participation, at least in urban areas. The study found evidence that placement of centres does not appear completely random, but rather that centres appear to be located in communities with higher demand for child care.

A number of researchers have recently written about indices of inequality in the field of ECCE in China (Cai & Feng , 2004; Zhang, 2005; Li & Liu, 2002). In a study of preschool education programs in low income communities in Beijing (Qinghua, Yan, Yan, & Qiaong, 2005), the researchers found that the current social and economic transformations are posing a serious challenge to working parents. The study found that the number of children under the age of three enrolling in a nursery school has dropped from 26.3% in 1990 to 12.7% in 2002. Factors influencing the decrease in enrolment include the reduction in child population, the closing

of nursery schools as a cost saving measure by enterprises (private corporations) and non-competitive schools are closing. As result, access to education for young children in low-income families is at risk with the shift of funding from public funds to financial self-sufficiency. With the increase in school fees, conditions have improved but enrolment of children has decreased putting a growing population at risk.

Educational reform at higher levels of education also includes the aim of reducing regional and socioeconomic disparities as a primary aim. (Chinese National Commission for UNESCO, 2004). In specific terms, the State Council's action plan for reform calls for governments at the central, provincial, and municipal levels to insure levels of local educational funding through transfer payments. Transfer of expertise and staffing is also proposed in which eastern regions schools dispatch teachers and administrators to schools in the western regions and poor areas! In addition the action plan calls for aid to poor rural families to ensure that their children can receive compulsory education; some provision for free school textbooks is already in place. In ECCE, there do not appear to be such expansive equity plans although some subsidies are currently in place. For example, from the CHNS data (Kilburn & Datar, 2002), it is reported that 29% of urban families who use outside child care do not pay and for those who do, the cost of child care is a relatively small fraction of household income (0.4%). Nevertheless, there seems to be more clarity on the need for government funding for equity aims at higher levels of the education system. In addition, the shift to a market model and more funding via parent fees in ECCE continues to produce hardships for rural families as well as poor urban families (Quinghua, Yan, Yan, & Qiaong, 2005)

5. Areas of significant progress

The review in this paper suggests that there have some long strides on the path of improving the ECCE system for China's children. To summarize, there is:

- a strong national strategy with coherent progressive national policies • a high public/political profile for ECCE
- improved access to near universal provision in developed areas
- a strong emphasis on teacher training and development as a key to ECCE development
- some bottom up success, including local experimentation with curriculum and programs with evaluation.

6. Areas needing further attention

At the same time, the review shows that broad policies lack implementation strategies and resources and do not address inequalities. To summarize, there is:

- inequitable access, depending strongly on region and economic means of the parents; furthermore gaps may widen even though overall levels of access improve.
- relative neglect of quality improvement and program monitoring; for example, it has been reported that the quality of pre-primary classes is less than in kindergarten.
- lack of provision for inclusion for special education, minority language, migrant children
- lack of a general strategy of reform that combines top-down pressure with supports and monitoring assistance, while maintaining bottom-up engagement

7. Concluding Observations

In China, the national strategy for ECCE is coherent and public awareness of its value has been enhanced. Country-wide figures are moving in the direction of improved access but quality improvements, apart from increasing levels of staff education have not been documented. In terms of access overall progress does not mean equitable access. In fact, it is possible that disparities are being widened between urban and rural, rich and poor, if progress is coming more rapidly for the more privileged segments of society.

Although reducing inequities in access to ECCE is a policy goal, inequities may also be perpetuated by policy. “Two-tier” expectations for developed and less-developed areas in the midterm may be seen as a pragmatic approach on the long road to eliminating inequities. Or it may reflect a view that the vocationally oriented school systems in less developed areas require less of a base in early childhood education and development than more developed areas. If beliefs tend toward the latter position and “that’s just the way it is”, further progress in EFA through ECCE will be stalled.

Looking at ECCE services mainly through the education policy lens seems somewhat blinkered. General child development supports societal aims of participation in the work force, whether in vocational work or the globalized

knowledge economy. It can also support other aims such as participation in a civil society. The neglect in the current policy discourse of the role of ECCE services in supporting women who work is remarkable given the traditional emphasis on the liberation of women since the founding of the PRC (Zhengao, 1993). Of course Kindergarten for children 3-6 has the dual role of supporting working parents even though aims for child development and education function are paramount in the discourse for this age range. Zhu and Wang (2005) report that decoupling the support of working mothers and child development was a key assertion in the 1989 Regulations on Work in Kindergarten, but the advantage of this move is not clear.

The relative neglect of 0 to 3 in data and analyses on China is a stark contrast to the interest in 3 to 6 programs, but not surprising since around the world concern for the early years is turned into actual provision of services by pushing down services from school age. Even in OECD countries it is common for countries to have curriculum frameworks for 3 to 6 year-olds but not for 0 to 3 (Bennett, 2004). Countries that do have frameworks for the entire span 0 to 6 generally have unified auspice for early years, usually in education. This may be the wave of the future in China (Wong & Pang, 2002). Nevertheless, even in western countries without a general curriculum framework for 0 to 3, such as the US and Canada, there is keen interest and analysis of program quality and access with various databases and many academic studies of the implications for outcomes for children and policy improvement

There is much to admire in the development of China's ECCE system. Western experts interested in adding emotional and self-regulation to the developmental aims of early childhood programs might benefit by studying Chinese approaches. The public and political interest and elaborate national policy framework have set the stage for moving to more universal and equitable provision. The spirit of trying and evaluating new ideas among teachers as well, as researchers, bodes well for further improvement. This grassroots spirit of analysis could be replicated at a policy level with better monitoring and data to guide further action plans.

Appendix 1

List of Scholars and Officials Consulted

Professor Zhu Jiexiong (Head, Institute of Preschool Education), East China Normal University, China

Hua Shu, Beijing Normal University,

Zhang, Yan (Early Childhood Education Division) Beijing Normal University, China

Luo, Xian hua (Editor of “Studies in Preschool Education”), China

Dr. Wong, Ngai Chun Margaret (Director of Programmes -Early Childhood and Special Education), Hong Kong Institute of Education, Hong Kong, S.A.R.

Sansan Ching (Director, Hong Kong Council of Early Childhood Education and Services), Hong Kong, S.A.R.

Dr. Bernard Spodek, University of Illinois, United States

Mary E. Young, World Bank, Washington, D.C.

Dr. Joseph Tobin, Arizona State University, United States

Dr. Linda Siegel, University of British Columbia, Canada

APPENDIX 2

Updated Tables from UNESCO (2003)

Table 1 provides information on total enrollments in kindergartens for the period 1995-2001, based on official statistics.

Table1 Total Enrollments in Kindergartens, 1995-2003 (Unit: thousand)

Year	Total Enrollment In Kindergartens	Total Enrollment in Pre-primary Classes	Number of Enrollment in Kindergartens of the year	Number of Enrollment in Primary School of the Year
1995	27,112	16,066	1972.4	2531
1996	26,663	15,723	1951.6	2524
1997	25,190	14,360	1824.3	2462
1998	24,030	13,121	1720.0	2201
1999	23,263	11,912	1617.5	2029
2000	22,441	11,006	1531.1	1946
2001	20,218	9,921	1398.2	
2002	20,360	9,806	1373.6	
2003	20,039	9,002	1316.7	

Table 2 Number of Kindergartens & Number of Kindergarten and Preprimary Classes

Year	Number of Kindergartens	Number of Kindergarten & Preprimary Classes	Of which, Number of Preprimary Classes
1995	180,438	806,070	467,838
1996	187,324	809,394	462,517
1997	182,485	801,233	454,218
1998	181,368	789,027	437,217
1999	181,136	781,450	403,426
2000	175,836	771,532	388,273
2001	111,706	748,394	374,113
2002	111,752	742,088	356,959
2003	116,390	728,511	325,182

Source: Data given by the Early Child Education Division of the Basic Education Department of MOE

Table 4: Number of the Kindergartens and Children in the Kindergartens
(Unit: Thousand)

Year	Urban		Countryside	
	Number of Kindergartens	Number of Children in Kindergartens	Number of Kindergartens	Number of Children in Kindergartens
1995	3.7	536.4	10.7	1624.9
1996	3.6	520.9	11.0	1577.0
1997	3.6	503.4	10.7	1453.0
1998	3.6	502.0	10.4	1340.2
1999	3.7	510.5	10.2	1259.1
2000	3.7	503.1	9.3	1162.9
2001	2.8	464.0	5.3	1045.6
2002	2.9	488.6	4.9	1004.9
2003	3.2	479.5	5.0	940.4

Notes: data resources are from Educational Statistics Yearbook of China, by Department of Development & Planning, MOE, P.R.China, published by People's Education Press

APPENDIX 3

ECCE Staff Education in China

Table 3

Education background for Kindergarten principals and full-time teachers
China National Education Statistics Yearbook (2002)

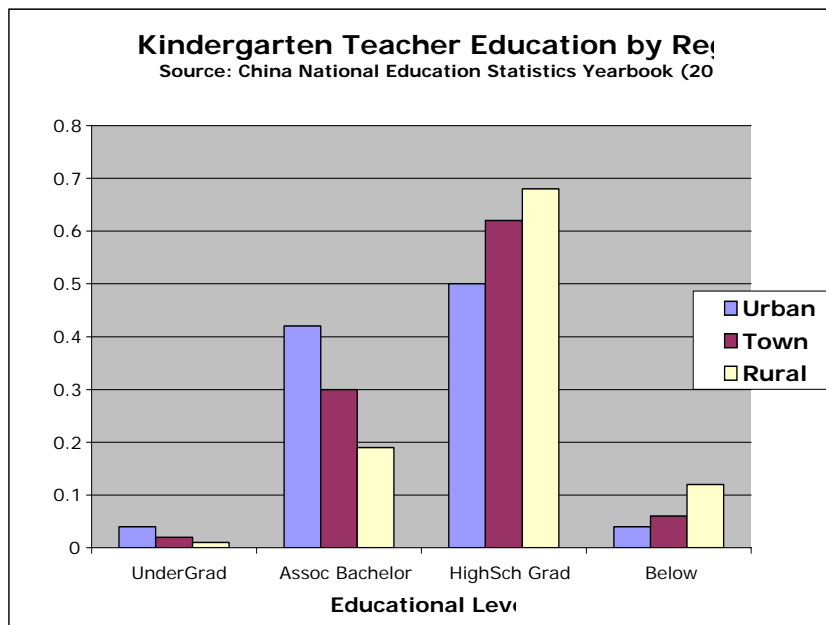
	Total	Education Background				
		Graduate	Under-graduate	Associate Bachelor	High school Graduate	Below High school Graduate
Total	659,268	552	19,305	224,776	373,893	40,742
Principals	88,041	339	6,038	34,430	42,710	4,524
Full-time Teachers	571,227	213	13,267	190,346	33,183	36,218
Urban	290,600	446	13,271	126,403	140,168	10,312
Principals	37,111	283	4,081	17,819	13,606	1,322
Full-time Teachers	253,489	163	9,190	108,584	126,562	8,990
Town	226,148	93	4,711	69,671	137,726	13,947
Principals	29,034	47	1,441	10,595	15,426	1,525
Full-time Teachers	197,114	46	3,270	59,076	122,300	12,422
Rural	142,520	13	1,323	28,702	95,999	16,483
Principals	21,896	9	516	6,016	13,678	1,677
Full-time Teachers	120,624	4	807	22,686	82,321	14,806

Table 4

Number of Teachers, Staff & Workers in Kindergarten (2002)

	Teachers, Staff & Workers					Substitute teachers	Part-time teachers
	Total	Principals	Full-time teachers	Health Nurses	Others		
Total	903319	88041	571227	56644	187407	64462	11578
Graduates of pre-school education programmes	480595	50190	406261	8267	15877	28743	3951

Figure 1



References

- Alur, M. & Rioux, M. (2003). *Included! An Exploration of Six Early Education Pilot Projects for Children with Disabilities in India*. Toronto: York University.
- Barnett, W. S. (2001). "Preschool education for economically disadvantaged children: Effects on reading achievement and related outcomes". In S. Neuman & D. Dickinson (Eds.) *Handbook of Early Literacy Research*. New York: Guilford Press, pp. 421–443.
- Bartlett, K, Arnold, C. & Sapkota ? (2003). *What's the Difference? The Impact of Early Childhood Development Programs*. Kathmandu, Nepal: Save the Children (U.S.).
- Bennett, J. (2004) *Curriculum issues in national policy-making*, Paris, OECD// Malta, EECERA.
- Bernard van Leer Foundation and Consultative Group on Early Childhood Care and Development (1999). "The Effectiveness Initiative" Early Childhood Matters. October 1999, NO 93 and Coordinator's Notebook, No. 23, 1999.
- Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57, 111-127.
- Brooks-Gunn, J. (2003). "Do you believe in magic? What we can expect from early childhood intervention programs". *Social Policy Report*, Volume XVII, Number 1. Chicago: Society for Research in Child Development.
- Cai Y., & Feng X. (2004) On the orientation of Fair Value and its Realization in Our Policy for Preschool Education. *Education and Economics*, 2004(2), 33-36.
- Carolina Population Center at the University of North Carolina at Chapel Hill. (2006). *China Health and Nutrition Survey*. Author. United States. Retrieved April 15, 2006 from <http://www.cpc.unc.edu/china>
- Chen, Q., & Jiang, Y. (2002). Social competence and behavior problems in Chinese preschoolers. [Special Issue: Cultural Perspectives on Social Competence in Early Childhood], *Early Education and Development*, 13(2), 171-186.
- China Ministry of Education. (2001). *Kindergarten Education Guideline*, 2001.
- China Ministry of Education. (2006). *A survey of the development of basic education*. Retrieved March 15, 2006 from http://www.moe.edu.cn/english/basic_b.htm
- China State Council. (2003). *Opinions from the Department (Units) including the Ministry of Education on innovations and development of early childhood education*.
- Clarke-Stewart, A., & Allhusen, V. D. (2005). *What we know about childcare*. Cambridge and London: Harvard University Press.
- Cleveland G. & Krashinsky, M. (2001) - *Our children's future: Child care policy in Canada*. University of Toronto Press.
- Cleveland, G. & Krashinsky, M. (1998). The benefits and costs of good child care: the economic rationale for public investment in young children. Toronto: Childcare Resource & Research Unit, University of Toronto
- Cleveland, G., Corter, C., Pelletier, J., Colley, Bertrand, J., & Jamieson, J. (2006). A review of the state of the field of early childhood learning and developing in child care, kindergarten and family support programs. Prepared for the Canadian Council on Learning. Toronto: Atkinson Centre for Society and Child Development, University of Toronto. June. <http://www.ccl->

cca.ca/NR/rdonlyres/67F194AF-8EB5-487D-993C-7CF9B565DDB3/0/SFREarlyChildhoodLearning.pdf

- Colclough, C.; UNESCO Global Monitoring Report Team / UNESCO - Education Sector (2002) EFA Global Monitoring Report UNESCO
- Consultative Group on Early Childhood Care and Development, (2001). Early Childhood Indicators~
- Cost, Quality and Child Outcomes Study Team, (1995). *Cost, Quality and Child Outcomes in Child Care Centers*. Denver: Department of Economics, University of Colorado.
- Doherty, G., Friendly, M., & Beach, J. (2005). *OECD Thematic Review of Early Childhood Education and Care: Canadian Background Report*.
- Doherty, G., Friendly, M., & Forer, B. (2002). *Child care by default or design? An exploration of differences between non-profit and for-profit Canadian child care centres using the You Bet I Care! data sets*. Occasional paper number 18. Toronto, ON: Childcare Resource and Research Unit, University of Toronto.
- Evans, J. (1998) *Inclusive ECCD: A Fair Start for All*. The Coordinators Notebook Number 22. Consultative Group on Early Childhood Care and Development.
- Evans, J., Myers, R. & Illfeld, (2000). *Early Childhood Counts: A Programming Guide on Early Childhood Care for Development*. Washington: The World Bank.
- Friendly, M.; Beach, J.; Turiano, M. (2002) Early Childhood and Care in Canada 2001, Toronto: Centre for Urban and community Studies, University of Toronto
- Gargiulo, R. M., & Piao, Y. (1996). Early childhood special education in the people's republic of China. *Early Child Development and Care*, 118
- Gu, L., & Wang, J. (2006). School-based research and professional learning: An innovative model to promote teacher professional development in China 1. *Teaching Education*, 17(1), 59-73.
- Howes, C., & Rubenstein, J.L. (1985). Determinants of toddlers' experience in day care: Age of entry and quality of setting. *Child Care Quarterly*, 14(2), 140-51
- Hsueh, Y., & Tobin, J. (2003). Chinese early childhood educators' perspective on dealing with a crying child. *Journal of Early Childhood Research*, 1(1), 73-94.
- Hsueh, Y., Tobin, J. J., & Karasawa, M. (2004). The Chinese kindergarten in its adolescence. *PROSPECTS*, 34(4), 457-469.
- Jaramillo, A., & Tietjen, K. (2001). *Early Childhood in Africa: Can We Do More for Less? A Look at the Impact and Implications of Preschools in Cape Verde and Guinea*. Africa Region Human Development Working Paper Series. Washington: Africa Region, The World Bank.
- Jiaxiong, Z., & Nianli, Z. (2005). A survey of current Shanghai early childhood education through kindergarten directors' self-assessment. *International Journal of Early Years Education*, 13(2), 113-127.
- Jingbo, L., & Elicker, J. (2005). Teacher-child interaction in Chinese kindergartens: An observational analysis. *International Journal of Early Years Education*, 13(2), 129-143.
- Kamerman, S., Neuman, M., Waldfogel, J. & Brooks-Gunn, J. (2003). *Social Policies, Family Types and Child Outcomes in Selected OECD Countries*. OECD Social, Employment, and Migration Working Papers No. 6.

- Kilburn, R., & Datar, A. (2002). The availability of child care centres in China and its impact on child care and maternal work decisions. *Labour and Population Program No. 02-12*. Los Angeles: Rand.
- Lee, L. (1992). Day care in the People's Republic of China. In M. Lamb, K. Sternberg, C.P. Whang, A. Broberg (Eds.), *Child care in context: Cross cultural perspectives* (pp. 355-392). Hillsdale: Lawrence Erlbaum Associates.
- Li, H., & Rao, N. (2005). Curricular and instructional influences on early literacy attainment: Evidence from Beijing, Hong Kong and Singapore. *International Journal of Early Years Education, 13*(3), 235-253.
- Love, J., Schobert, P., & Meckstroth, A. (2002). "Investing in effective childcare and education: Lessons form Research". In M. Young (Editor) *From Early Child Development to Human Development: Investing in Our Children's Future*. Washington D.C.: World Bank pp 145-193.
- Ma, B., & Guo, X. (1995). *An evaluation study of parent schools in China. Action research in family and early childhood*. France: The Young Child and the Family Environment Project.
- McCain, M. & Mustard, F. (1999). *The Early Years Study: Reversing the Real Brain Drain*. Toronto: Government of Ontario.
- McLoughlin, C. S. (2005). The coming-of-age of china's single-child policy. [Special Issue: Culture and Psychology: Fulbright Psychologists and Educators in China], *Psychology in the Schools, 42*(3), 305-313.
- McLoughlin, C., Pang, L., & Dong, Q. (1997). The past, present and future of Chinese early childhood education. *School Psychology International, 18*, 275 - 288.
- McMullen, M., Elicker, J., Wang, J., Erdiller, Z., Lee, S., & Lin, C. et al. (2005). Comparing beliefs about appropriate practice among early childhood education and care professionals from the U.S., China, Taiwan, Korea and Turkey. *Early Childhood Research Quarterly, 20*(4), 451-464.
- Myers, R. (2002). *Thematic Studies: Early Childhood Care and Development*. United Nations Children's Fund. UNESCO: Paris.
- OECD, (2001). *Starting Strong: Early Childhood Education and Care*, Paris: Author.
- Olmstead, P., & Weikart, D. (Eds.). (1989). *How nations serve young children: Profiles of child care and education in 14 countries* (1st ed.). Ypsilanti, Michigan: High Scope Educational Research Foundation.
- Olmstead, P., & Weikart, D. (Eds.). (1994). *Families speak: Early childhood care and education in 11 countries* (1st ed.). Ypsilanti, Michigan: High Scope Educational Foundation.
- Olmsted P., Weikart, D., & Montie J. (Eds.). (2001). *Early Childhood Settings in 15 Countries: What are their Structural Characteristics?* Ypsilanti, MI: High/Scope Press.
- Olmsted, P. P. (1996). *A comparative study of early childhood programs in 15 countries*. The IEA preprimary project. Michigan.
- Pang Li Juan, Hu Juan, Hong Xiu ming (2001) Current issues and future suggestions of preschool education in China. *Studies in Preschool education, 2001*(1)
- Pearson, E., & Rao, N. (2003). Socialization goals, parenting practices, and peer competence in chinese and english preschoolers. [Special Issue: Early Childhood Education in Hong Kong], *Early Child Development and Care., 173*(1), 131-146.

- Penn, H. (1999). *How should we care for babies and toddlers? An analysis of practice in out-of-home care for children under three*. Toronto: Childcare Resource & Research Unit, University of Toronto.
- Penn, H. (2001). "Research in the Majority World". In *Promoting Evidence-based Practice in Early Childhood Education: Research and its Implications*. Vol. 1 pp 289–308. Elsevier Science Ltd.
- Penn, H. (2002). The world bank's view of early childhood. *Child Hood*, 9(1), 118-132.
- Qinghua, J., Yan, L., Yan, Z., & Qiong, L. (2005). A survey of current pre-school education of/for children from urban low-income families in Beijing. *International Journal of Early Years Education*, 13(2), 157-169.
- Ross, H. (2004) *China country study*. Report to UNESCO Global Monitoring Report. http://portal.unesco.org/education/en/ev.php-URL_ID=43774&URL_DO=DO_TOPIC&URL_SECTION=201.html
- Ruopp, R., et al. (1979). *Children at the Center: Summary Findings and Their Implications*. Final Report of the National Day Care Study, Volume I. US; Massachusetts.
- Shi, Hui Zhong. (1989). In P. Olmstead, & D. Weikart (Eds.). *How nations serve young children: Profiles of child care and education in 14 countries* (1st ed.). Ypsilanti, Michigan: High Scope Educational Research Foundation.
- Short, S., & Sun, R. (2004). Grandmothers, formal care, and educational advantage in China. *Research in Sociology of Education*, 14, 7-31
- Soo-Hyang Choi (2006). Pre-Primary Education: The Valid Investment Option for EFA. March-April 2006. *UNESCO Policy Brief on Early Childhood. Section for Early Childhood and Inclusive Education*. Division of Basic Education, Paris.
- South Asia Education Sector, The World Bank, New Delhi Office. (2003). *Reaching Out to the Child: An Integrated Approach to Child Development*. Executive Summary.
- Spodek, B. (1987). Reform in Chinese kindergartens: The preparation of kindergarten teachers. U.S.; Illinois:
- Spodek, B. (1989). Preparation of early childhood teachers in the people's republic of China: Recent developments. *Childhood Education*, 65(5), 268.
- Sylva, K. Melhuishi, E., Sammons, P., Siraj-Blatchford, I., Taggart, B., & Elliot, K. (2003). *The Effective Provision of Pre-School Education (EPPE) Project: Findings from the Pre-school Period*. London: Institute of Education, University of London.
- Tian, Xiaoling, & Chaille, C. (2006). Perspectives and practices in Chinese, Japanese, and U.S. preschools: Building caring relationships that foster children's autonomy and motivation. Paper presented at the Annual Meetings of the American Educational Research Association, April 10, San Francisco.
- Tobin, J., Wu, D., & Davidson, D. (1989). *Preschool in three cultures: Japan, China and the United States* (1st ed.). 1989: Yale University Press.
- UNESCO (2003a). *Cross-sectoral Co-ordination in Early Childhood: Some Lessons to Learn* Policy Brief on Early Childhood No. 9. January 2003.
- UNESCO (2003b). *A national case study of services provided for children: Early childhood care and education in China* (Case Study No. n/a). Beijing, China: UNESCO. (China ECE Case Study UNESCO 2003) .

- UNESCO. (1996). *Links between early childhood development and education and primary education*. UNESCO education sector monograph no. 6, 1996 No. ED96WS42). Paris, France: Early Childhood and Family Education Unit.
- UNESCO. (1998). *Early Child Development: Laying the Foundations of Learning*
- UNESCO. (2002)? ~Policy Brief on Early Childhood No. 1 March.
- UNESCO (undated). China: Early Childhood Education and Care (ECCE) programs.
- Vandell, D.L. (2004). Early Child Care: The Known and the Unknown. *Merrill Palmer Quarterly Journal of Developmental Psychology*, 50(3), 387–414.
- Wang, J., & Mao, S. (1996). Culture and the kindergarten curriculum in the People's Republic of China. *Early Child Development and Care*, 123
- Wang, X., Bernas, R., & Eberhard, P. (2005). Maternal teaching strategies in four cultural communities: Implications for early childhood teachers. *Journal of Early Childhood Research*, 3(3), 269-288.
- Willms, J.D. (2002). Standards of care. In M. Young (Ed.). *From Early Child Development to Human Development: Investing in Our Children's Future*. Washington D.C.: World Bank, pp. 81–123.
- Wong, M., & Pang, L. (2002). Early childhood education in China. In L. Chan, & E. Mellor (Eds.), *International developments in early childhood services* (pp. 53 –69). New York: Peter Lang.
- World Bank. (2000). *Education for All: From Jomtien to Dakar and Beyond*. A paper prepared for the World Education Forum in Dakar, Senegal, April 26–28, 2000.
- Yan, C. (2005). Developing a kindergarten curriculum based on children's 'naive theory'. *International Journal of Early Years Education*, 13(2), 145-156.
- Yan, L., & Xiaoxia, F. (2005). Kindergarten educational reform during the past two decades in mainland china: Achievements and problems. *International Journal of Early Years Education*, 13(2), 93-99.
- Yan, L., Yuejuan, P., & Hongfen, S. (2005). Comparative research on young children's perceptions of play--an approach to observing the effects of kindergarten educational reform. *International Journal of Early Years Education*, 13(2), 101-112.
- Young, M. (1996). *Early Child Development: Investing in the Future*. Washington: The World Bank.
- Young, M. (2002). Ensuring a fair start for all children: The case of Brazil. In M. Young (Ed.). *From Early Child Development to Human Development*, Washington DC: The World Bank, pp. 123–142.
- Young, M. (2003). *Effective Strategies for Early Child Development in Peru*. Presentation in Lima, Peru, June 2003.
- Young, M. (Ed.). (2002). *From Early Child Development to Human Development: Investing in Our Children's Future*. Washington D.C.: World Bank.
- Zhengao, W. (1993). China. In M. Cochran (Ed.), *International handbook of child care policies and programs* (1 ed.) (pp. 83-106). Westport, Connecticut: Greenwood Press.
- Zhu, Jiaxiong, & Wang, C. (2005). Contemporary early childhood education and research in China. In B. Spodek and O. Saracho (Eds.), *International perspectives on research in early childhood education*. Information Age Publishing: Greenwich, CT, U.S.

Zhu, Jiexiong, & Zhou, Nianli. (2005). A survey of current shanghai early childhood education through kindergarten directors' self-assessment. *International Journal of Early Years Education*, 13(2), 113-127.