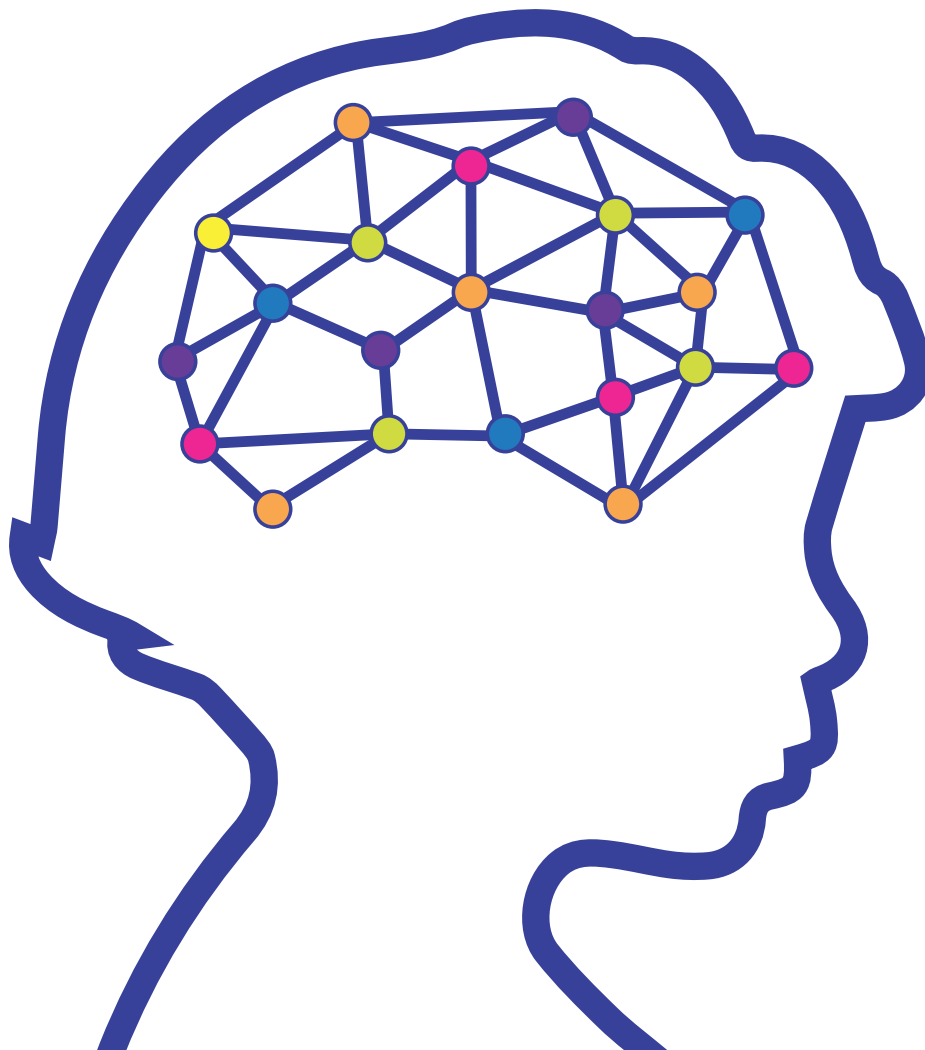




The National Consultation on 'Building Cognitive Capital for Children' for Sustainable Development

SUMMARY REPORT

May 16th 2017 Beijing, China





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Executive summary

Investing in children to enable them to develop their full cognitive potential fulfils a moral imperative and an international commitment. The Convention on the Rights of the Child commits State Parties to pursuing “the development of the child's personality, talents and mental and physical abilities to their fullest potential”.¹ Ensuring children have, and are able to access, the tools and services needed to enable a strong start in life is core to realizing China’s commitment to children.

Prioritizing cognitive capital is one of the highest-return investments a country can make, and is an effective development strategy. Investment in Early Childhood Development (ECD), which encompasses education, health, nutrition, protection, and an enabling environment for children to ensure optimal brain development, has a knock-on effect. It impacts a child’s skills in all facets of life, which leads to better employment prospects when adults, and a stronger contribution to the health of their nation. It has been shown that ECD investment improves education and health outcomes and can increase adult earnings by up to 25%. The importance of, and returns from, investing in early childhood will only continue to increase as the world moves at an ever-increasing pace into an economy dependent on knowledge.

Cognitive capital provides a robust, integrated framework to guide investment in the multiple dimensions of children’s brain development. It recognizes that cognitive development is the result of different stimuli affecting a complex network of neural connections that develop during the first three years of life and that shape a child’s, and future adult’s, ability to learn, imagine, relate to others, and think through problems. Developing cognitive capital is multidimensional and time-sensitive and requires a carefully integrated set of policies and interventions across sectors. These policies include basic quality services in areas such as education, health and nutrition, as well as interventions geared towards enabling caregivers to provide a safe, nurturing, and stimulating environment for children.

Success in investing in cognitive capital rests on the ability to correctly identify the nature and scale of the needs of children and families. Families bear a share of the responsibility for children’s cognitive capital development during the first few years of life. It is important to find ways to effectively integrate their concerns and views into policy design through bottom-up approaches. This needs to be combined with better research and data collection.

The design of effective policy frameworks to implement cognitive capital interventions is also needed. A successful model integrates a strong social protection system (including conditional and non-conditional cash transfers) with a focus on the supply of effective, efficient, equitable, and integrated services.

The Government of China has already taken important steps towards implementing effective policies ensuring the development of cognitive capital, but there are still challenges to overcome. There are stark differences in the living conditions, access to services, and opportunities available to families both across

¹ UN General Assembly, Convention on the Rights of the Child, 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3, available at: <http://www.refworld.org/docid/3ae6b38f0.html> [accessed 20 October 2017].

and within China's different regions and this can result in some children's cognitive capital developing more fully than others. Because these differences have been present over time, this means that the investment needed for children in these diverse settings varies significantly. Not addressing these inequities will result in even larger disparities in the future, and will stunt social progress and economic growth.

Coordination across ministries and different levels of government is important for the development of China's children's cognitive capital. Effective cognitive capital interventions need to be integrated, and this in turn requires a high level of coordination for joint action by a diverse range of actors. An important first step towards reaching this crucial level of coordination is to have a well-defined and integrated framework for the design, implementation, and evaluation of policies, with clearly defined processes and responsibilities for appropriate data generation and dissemination.

Investing more in cognitive capital for children is not a simple endeavor and is crucial to China's future success. This will require continued and increased efforts and investment to increase the knowledge base on children's brain development, finding more effective policies and interventions to foster this development, and identifying and applying the best ways to make sure these policies and interventions benefit all children equitably. Putting in place the right mix of policies and interventions to reach all, especially the most disadvantaged families and children, can ensure China's continued success.

5 key actions

1. Promote scientific research on brain development.
2. Improve social protection systems – both cash transfers and integrated services.
3. Make a stronger case for equitable investment in children. Think long-term by investing equitably today, benefitting today's children and tomorrow's national progress.
4. Use tools/evidence to focus on what works, and monitor and evaluate progress and impact over time.
5. Investments in Early Childhood Development have huge returns, as large as 7 to 1, and there is a need for national guidance on Early Childhood Development and more partnership involving all players in the field nationally to ensure every child gets the early opportunities they deserve.

Introduction

The National Consultation on ‘Building Cognitive Capital for Children’ for Sustainable Development took place on May 16th 2017 in Beijing, China as the first event exclusively dedicated to cognitive capital for Children in the country. UNICEF published a peer-reviewed paper titled ‘[What could cognitive capital mean for China's children?](#)’² in the *Psych Journal* to coincide with the meeting. The meeting was co-hosted by UNICEF China and the Chinese People's Association for Friendship with Foreign Countries.

Cognitive capital is an encompassing term for the set of cognitive skills and abilities that enable humans, children in particular, to interact meaningfully with the world around them through learning, perception, communication, and creativity. It provides a robust, integrated framework for investment in education, health, nutrition, protection, and an enabling environment for children to ensure optimal brain development.

Investing in cognitive capital is extremely important for many reasons. First and foremost, effective, efficient, and equitable investment in cognitive capital ensures children have the best start in life and access to the support and services they need, which is a core part of realizing the commitment that China has already made on the Convention on the Rights of the Child. It also has a knock-on effect, including better employment prospects later in life, and in turn a stronger contribution to the health of their nation. Building cognitive capital requires an integrated set of timely interventions that ensure optimal brain, emotional, and linguistic development.

The event featured insightful presentations and panel discussions regarding the concept of cognitive capital, its importance to the development of both children and wider society, and how households, institutions, and governments can foster it. The high-level presenters and panelists included Chinese government officials from ministries and departments, distinguished Chinese and international academics and policy experts, as well as national and international UNICEF staff.

Participants recognized the importance of investing in cognitive capital for children today as an investment in the future. For China in particular, as the population ages and economic growth moves towards a knowledge-based economy, this is a crucial moment to invest in the full cognitive development of the future workforce.

The event ignited interest and constructive debate about investment in cognitive capital for children in China, both as a pathway to continued sustainable growth and as a way of realizing children’s rights. It also provided a renewed impetus for UNICEF and other international and national organizations to strengthen their cooperation with the Chinese government as it strives to meet these goals.

This report summarizes the National Consultation to enable sharing and understanding across sectors. It reflects the argument made to think about children’s cognitive development and sustainable growth as one. By investing equitably in children’s cognitive capital, we not only benefit today’s children but tomorrow’s national progress.



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² Noble, D. J., Martin, K., Qin, L., Britto, P., O'sullivan, M., Popkins, J., Pouwels, R., Scherpbier, R. W. and Flowers, R. (2017), What could cognitive capital mean for China's children?. *Psych J*, 6: 153–160. doi:10.1002/pchj.170

Agenda

Time	Topic	Presenter
8:30-9:00	Registration	
9:00-9:10	Introduction to the proceedings of the day	Dr. Douglas Noble, Deputy Representative, UNICEF China Mr. Ji Yongjun, DDG, Department of American and Oceanian Affairs, Chinese People's Association for Friendship with Foreign Countries
9:10-9:20	Cognitive capital and investment in children in China	Mr. Anthony Lake, UNICEF Executive Director
9:20-9:25	Welcome Address	Madam Li Xiao Lin, President of Chinese People's Association for Friendship with Foreign Countries
9:25-9:45	Maximizing social returns on investment for Early Childhood Development	Dr. Martin Burt, International Public Policy Expert
9:45-10:05	Why Early Childhood Development Matters: Evidence from Neuroscience	Prof. Dong Qi, President, Beijing Normal University
10:05-10:45	Group Photo & Tea Break Simultaneous sessions for invited guests <i>1. Media Interaction - Anthony Lake, Martin Burt and Song Wenzhen (Chair – Dr. Douglas Noble)</i> <i>2. Policy Roundtable –Karin Hulshof, Rana Flowers and (Deputy) Director Generals from the Government of China (Chair – Dr. Robert Scherpbier)</i>	
10:45-10:50	Jackie Chan on cognitive capital	Dr. Margo O'Sullivan, Chief of Education, UNICEF China
10:50-11:05	Latest developments in Early Childhood Development globally	Dr. Pia Britto, Head of Early Childhood Development, UNICEF Headquarters
11:05-11:20	Experience and challenges on Early Childhood Education ages 3 to 6 in China	Ms. Jiang Jin, DDG, Department of Basic Education, Ministry of Education
11:20-11:35	Effective interventions for children ages 0-3 and poverty reduction experience in China	Mr. Lu Mai, Secretary General and Vice Chairman, China Development Research Foundation
11:35-12:45	Lunch	
12:45-13:15	How integrated social services and reaching the poorest with cash transfers promote Early Childhood Development, growth and address inequity	Dr. Michael Samson, Director of Research of the Economic Policy Research Institute
13:15-14:00	Panel discussion: Cognitive capital and sustainable growth	Moderated by Ms. Jillian Popkins, Chief of Social Policy, UNICEF China Panel discussion member: Dr. Michael Samson, Prof. Li Shi, Prof. Xu Yuebin
14:00-14:15	Tea Break	
14:15-14:35	Investing in cognitive capital: a diagnostic toolkit	Dr. Chai Jingqing, Chief, Social Inclusion and Policy, UNICEF HQ
14:35-15:45	Panel discussion: Research Priorities on cognitive capital	Moderated by Dr. Sarah Cook, Director, Innocenti Office of Research, UNICEF Panel discussion member: Prof. Fang Xiangming, Prof. Zhao Kun, Mr. Di Donghui
15:45-16:00	Summary	Dr. Douglas Noble, Deputy Representative, UNICEF China

1. What is cognitive capital, and why is it important?

'A sustainable tomorrow depends on investing in children today. In their health. In their protection. In their education. And first of all, in their minds. A child's most precious asset is her brain. Early Childhood Development is key to fulfilling her potential, her country's potential, indeed, the world's potential.

China dramatically illustrates this potential. It's not only the world's second-largest economy — it is home to the second-largest population of children: 271 million. Each child represents a singular opportunity to build on this country's progress.... So it is good news that early childhood development is a major government priority.'

- UNICEF Executive Director Anthony Lake



The paper “What could cognitive capital mean for China’s children”, authored by a team of UNICEF staff, provided the backdrop to a series of insightful interventions by distinguished speakers, including **UNICEF Executive Director Anthony Lake.**

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Cognitive capital is multi-dimensional, and includes the complex network of neural connections that shape children's ability to learn, to imagine, and to think through problems. Building these neural connections requires nutrition, stimulation, and protection from violence and pollution, especially in the first 1,000 days of life. Mr Lake emphasized the critical nature of investing in China's children equitably, fairly, and across social and economic divides using disaggregated data to track those children most in need.

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Madam Li Xiao Lin, President of Chinese People's Association for Friendship with Foreign Countries, reiterated the importance of investing in children through cross-cultural collaborations.

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The multi-dimensional nature of cognitive capital was reinforced by **Dr. Pia Britto**, UNICEF Chief of Early Childhood Development, who explained three types of cognition that comprise cognitive capital: social cognition relates to the ability to develop trust, attachment, and friendship in the context of healthy relationships; intellectual cognition relates to problem solving and creativity; and linguistic cognition relates to the ability to use language to acquire knowledge, and to communicate ideas and thoughts.



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Early interventions are crucial for the successful development of each of these types of cognition, as a large percentage of brain development occurs during the first three years of life. **Professor Dong Qi**, President, Beijing Normal University, presented on neuroscience findings.

During a child's first three years, brain areas which control the senses, motor development, control, emotions, thoughts, and creativity undergo a particularly fast process of change and are particularly

susceptible to all kinds of stimuli. The brain grows quickly from birth to the age of six, and this rate slows over time. Up to 90% of the brain's final weight has been established at the age of six. The case emerges as clear – investing in brain development in the early years of life makes a profound difference to a child's life chances.



成龙
联合国儿童基金会亲善大使
Jackie Chan
UNICEF Goodwill Ambassador

“The good news is that we can all help – making sure children have access to health, education, protection.”

- Jackie Chan, UNICEF Goodwill Ambassador, emphasized in his video address that good nutrition and more time for play are important elements to invest in children and their brain development.

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This period thus presents an important window of opportunity to affect positive brain development, and reap its wide-ranging and lasting benefits throughout life. This also means that negative experiences during this time in life can have serious and irreversible effects. Brain scans of children subject to abuse show an overdevelopment of the amygdala in the brain, whereas children who have more interaction with their parents have more developed hippocampus regions, central to learning and memory.

The investment case: cognitive capital as the key to sustainable growth in a knowledge economy



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Investing in cognitive capital for children is an urgent endeavor because it helps realize children’s rights and represents a high-return investment that can help boost future economic growth.

The potential gains are immense. UNICEF Director Anthony Lake pointed out each dollar invested in ECD returns 7 dollars’ worth of improvement in education and health outcomes, reduced crime, and reduced dependence on welfare. ECD interventions can also improve annual adult earnings by almost 25%.

Failure to invest in cognitive capital for children is a huge risk. As Dr. Britto discussed, nearly 250 million children globally under the age of five are at risk of not reaching their cognitive development potential. This in turn will affect the future workforce, who will be less productive at a time when demographic pressures (increasing dependency ratios in many countries), making the increase of productivity at a faster rate than population growth a necessity for future sustainable growth.

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Cognitive capital is key to sustainable economic growth because of the ongoing global transition to a knowledge economy, as noted by **Dr. Michael Samson**, Director of Research of the Economic Policy Research Institute. The success of future workers and economies will rest crucially on their ability to obtain, process, and create knowledge, which in turn requires communication and collaboration skills; in sum, their success will depend on their cognitive capital.

2. Policy instruments for cognitive capital investment

Governments and societies can enable the optimal development of every child's cognitive capital to become a reality. The importance of integrated policy packages that address all aspects of children's well-being, maximizing the synergies between interventions in different areas, was also noted by speakers. A comprehensive policy framework where research and data are central to policy design in a process of continuous improvement, with implementation properly monitored and evaluated is a key goal.

The importance of integrated policies

Integrated policy packages can ensure that caregivers have the ability, resources, and time to provide comprehensive care and support for children throughout different stages of their development, said Dr. Pia Britto. She proposed defining three packages: the family support and strengthening package, the multigenerational nurturing care package, and the early learning and protection package.

The family support and strengthening package includes access to quality services, and skills building and support for caregivers. The multigenerational nurturing care package includes measures directed towards the care and protection of caregivers' physical and mental well-being, and their capacity to provide nurturing care. The early learning and protection package integrates support for young children with caregiver support to create a nurturing learning environment.

Each of these packages includes a range of interventions in different areas, and within each area, differentiated interventions at each stage of early life. For example, the early learning and protection package includes interventions in education, child protection, health, and nutrition. However, the nature of these interventions will be different if the child is a newborn, an infant, in early childhood, or of school age.



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Dr. Britto concluded by pointing out that taking these interventions to scale requires moving beyond projects towards platforms to reach families and their children. These platforms must include systems already in place and delivery tools such as cash transfers, but must also integrate home visits and community-based systems.

Dr. Jingqing Chai, Chief of Public Finance and Local Governance at UNICEF Headquarters, emphasized the importance of interventions that are effective, efficient, and equitable, but also the importance of understanding the fullest meaning of those terms.

Effectiveness of investment in children is about spending on the right interventions, and it is important to realize that the right intervention varies not only with the desired outcome but also with context. The institutional model for caring for orphans and other vulnerable children, for example, works well in many places, but others, as was the case in Romania, may do better with a community-based model.



For cognitive capital, governments must consider, appropriately fund, and orchestrate many sectoral and non-sectoral policies that can interact to produce the maximum intended effects while improving equity.

- Dr. Jingqing Chai, Chief, Social Inclusion and Policy, UNICEF Headquarters.

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Efficiency means not only maximizing outputs for a given set of inputs, but also allocating public resources across different priorities in a way that takes into account how the effectiveness of investments in one area rests crucially on investments in other areas being sufficient. Malnourished, abused, discriminated, or excluded children are unlikely to do well in school, so educational outcomes depend on sufficient investment in areas beyond education.

Investing in children equitably means spending where the needs are greatest so that policy objectives are met everywhere. For example, bullying is a problem that affects many schools but not all equally, so thinking about equitable investment in children means making sure that all schools have sufficient resources to effectively address the issue and create an environment where all children can reach their full potential.

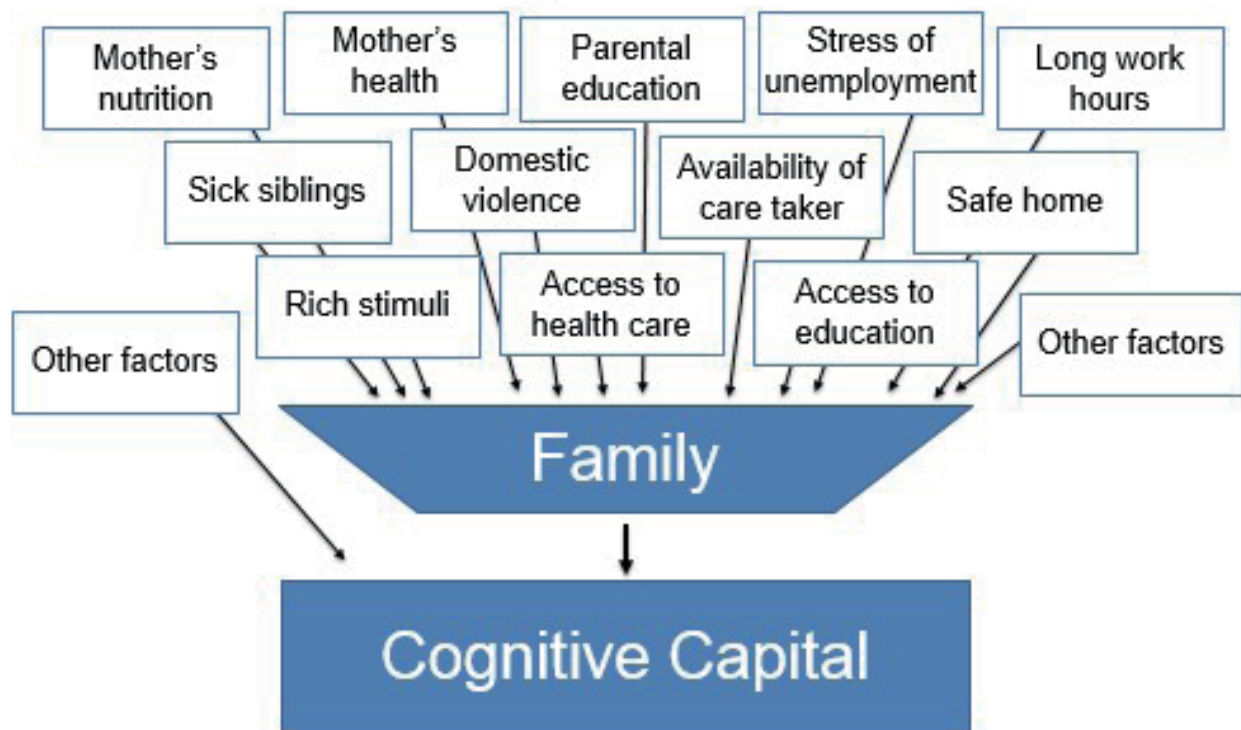
This requires policy frameworks that are integrated not only in the sense that they include overlapping interventions in different sectors, but also that incorporate a true appreciation of how procedures, specific local conditions, and customs affect the effectiveness, efficiency, and equity of policies for children.

It also requires a systematic approach to finding ways to finance these investments. There are a number of tools available for this, such as baseline assessments to determine how much is being spent on children directly or indirectly across different areas, cost-effectiveness analysis to examine if the interventions in place are delivering the desired results, public expenditure reviews and tracking studies to identify savings from existing spending, and benefit incidence analysis to assess equity.

Diagnostic tools for household self-reported data and putting families at the center of policies

Dr. Martin Burt, International Public Policy Expert, emphasized having households at the center of cognitive capital for children policies, due to the preeminent role they play in nurturing children.

“If families didn’t exist, it would be necessary to invent them”



Families play a crucial role in the development of the child so investing in poverty reduction with a focus on families has the highest social return and is the best way of fostering cognitive capital. Households cannot adequately perform these functions if they are burdened by poverty, unemployment, inefficient or inaccessible public services, or by emotional and/or environmental stress.



Improving conditions for families, and by extension for children, requires public policies and services to be designed and implemented from a true understanding of families' needs and context.

- Dr. Martin Burt, international public policy expert

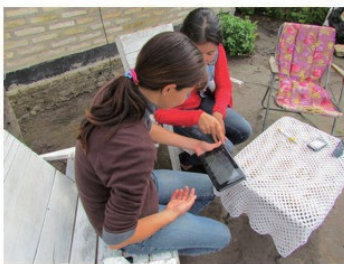
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Families provide care, education, emotional support, and other non-measurable elements which contribute to creating an enabling environment that fosters cognitive capital and overall child development. For families to fulfill these roles, there is a strong need and role for the state to put in policies and programs that support cognitive capital.

Dr. Burt's address provided a bottom-up perspective: fostering cognitive capital for children is about self-agency and self-efficacy, as it requires families to be invested, empowered, and convinced that they can make a difference in their own lives and their children's. He called for an increased focus on families throughout the policy process, from design to implementation and evaluation.




Dr. Burt presented a dashboard of indicators using mobile technology that can help households relay information about their situation in a way that is intuitive, empowering, and can also effectively inform policy design. These tools break down the concepts of poverty and ECD and present them through visual means to help families understand them and express their views quickly.

Visual Survey & Life Map

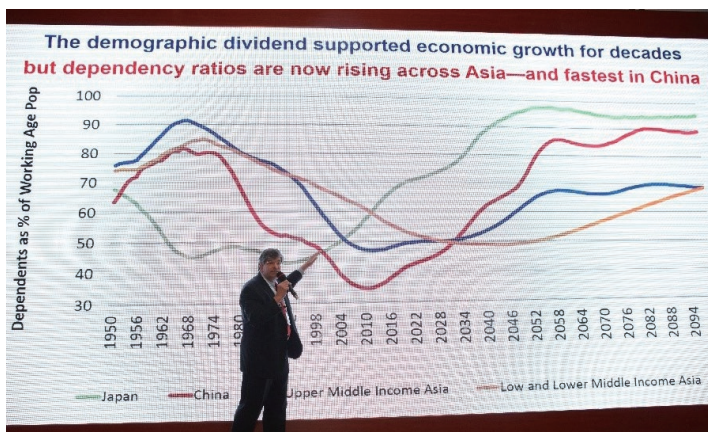


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12. Breast Feeding			
Non-poverty	Poverty	Extreme Poverty	Non-applicable
<p>Infants under 6 months of age are exclusively breastfed (with the exception of oral rehydration solution, vitamins, mineral supplements and medicines)</p> 	<p>Infants under 6 months of age receive mix feeding: combination of breast milk and formula milk</p> 	<p>Infants under 6 months of age did not receive breast milk or receive some type of supplementary (other than milk) food before 6 months</p> 	<p>NA option needs to be included if the child is over 6 months</p>

Social Protection Policies for cognitive capital



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Participants in the conference agreed that for investment in cognitive capital for children to be effective, it must take the form of a well connected package of interventions in early childhood. Professor Michael Samson argued that putting in place a social protection framework with Conditional Cash Transfers (CCTs) at the center, coupled with the equitable supply of comprehensive, effective and efficient public services, is a very effective way of delivering this package.

CCTs provide poor households with children a regular transfer of a given amount of money, and require households to enroll their children in school, take them for regular health check-ups, to be vaccinated, or a combination of these and other child development-friendly interventions. That is, they address the demand-side barriers that families face in trying to create the conditions for their children to develop fully.

Social protection interventions also need to address the full life-cycle in order to be an effective tool for creating cognitive capital. Conditional cash transfers must be coupled with investments in ante- and post-natal care, early childhood development, child protection, education at different levels, health for children and caregivers, and early adolescence interventions, and livelihoods promotion, as well as other welfare services for households.

- Professor Samson



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Professor Samson suggested that social protection, and particularly cash transfers, can be very effective in fostering cognitive capital formation when coupled with other overlapping and mutually reinforcing interventions across sectors. For example, monitoring data for UNICEF’s own Integrated Maternal and Child Health (IMCH), Communication for Development (C4D) and cash transfers program in four western Chinese provinces showed improved rates of vaccination for children, reduced rates of maternal mortality and improved overall maternal health.

If social protection follows a coordinated multi-sectoral and life-cycle approach within a comprehensive planning framework, it has the potential to reduce vulnerability, promote well-being, and maximize returns to cognitive capital, thus promoting inclusive social development and equitable and sustainable economic growth.

3. Policies for cognitive capital for children in China

This panel discussion revolved around the state of cognitive capital and related public policies in China, and was moderated by **Jillian Popkins, Chief of Social Policy** at UNICEF China, with the participation of **Dr. Michael Samson** and **Professors Li Shi and Xu Yuebin** of Beijing Normal University.



Some panel members argued that social policies should focus on labor market integration. The benefits are twofold: employed parents are more likely to have the resources to create an enabling environment for cognitive capital; and interventions focused on creating good job prospects for children in the future are usually cognitive capital-enabling.

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One main obstacle to fostering cognitive capital for children in China are regional differences, as disparities in income and in the quality and availability of services between urban and rural areas translate into even larger gaps in outcomes such as maternal mortality, child mortality, stunting, or educational achievement.

These gaps can be addressed by well designed, geographically balanced, and well-funded policies. Early Childhood Development and social services funding is particularly lacking in rural and disadvantaged areas. The panel stressed the need for a comprehensive framework for the design, monitoring, analysis and evaluation of policies, their results, and interactions.

A recurring theme throughout this panel was how to finance social policies, and in particular those most relevant to cognitive capital for children. The panel discussed concerns that expanding transfers may increase welfare dependence and therefore become more costly over time, which could lead to a high fiscal burden which in turn might hurt competitiveness.

Professor Michael Samson argued that cash transfers address both concerns: they do not create welfare dependence, and their social and economic benefits ultimately outweigh their cost. Evidence suggests that, rather than become welfare dependent, beneficiaries are more active and successful in the labor market than non-beneficiaries. The benefits of cash transfers are multiple: they produce macroeconomic feedback loops through increased demand, increased social cohesion, decreased crime, and increased productivity, among others.

The panelists reflected on what is needed to effectively implement cognitive capital-friendly policies going forward. It is of paramount importance to extend service coverage in rural



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areas and increase their quality in order to close outcome gaps. To improve services and programs and close regional gaps, it is necessary to have accurate, timely, and comprehensive longitudinal data informing a robust policy-making, implementation, and evaluation framework. Implementing and operating such a comprehensive framework is very difficult, but is an imperative for social protection to be an effective tool in fostering cognitive capital.

Experience and challenges in China's Early Childhood interventions

The Chinese government has long recognized the importance of investing in early childhood in different areas as discussed by **Ms. Jiang Jin, Deputy Director General of the Department of Basic Education at the Ministry of Education, and Mr. Lu Mai, Secretary General and Vice-Chairman of the China Development Research Foundation.**



China has invested significantly in early childhood education to reduce rural/urban gaps. In the past six years (From the year of 2011), enrolments have increased by 10 million new students, with governments investing more than 400 billion RMB and building 60,000 kindergartens - Ms. Jiang Jin, Deputy Director General of the Department of Basic Education at the Ministry of Education.

Madame Jiang Jin highlighted the significant progress achieved so far in China in terms of expanding access to Early Childhood Education (ECE). The government has ambitious plans to advance ECE to universal public ECE access with work towards improving resource allocation for early childhood care and education, standardizing kindergarten management and improving teacher quality. Each county will have its own three-year ECE development plan, establishing service models and monitoring frameworks for kindergartens, and the number of kindergartens across the country will increase to 240,000 with the goal of universal coverage of ECE.

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ECE in China still faces important challenges. ECE demand has increased significantly and will increase at an even faster pace with the onset of the two-child policy. Another important challenge is the unbalanced development of ECE across regions, caused by insufficient and disproportionate financial investment. Tackling these challenges will require developing robust financing arrangements and cost sharing mechanisms to extend coverage of universal resources across regions. It will also require innovative thinking to simultaneously improve education quality and make ECE more affordable. Improvements in critical areas such as the division of labor, integration of resources, teacher training, and guidance systems will be key.



China faces inequity challenges (the Gini index was 0.465 in 2016), and simple redistribution of resources will not eliminate inequity: it requires grassroots level engagement to transform communities and society and encourage solidarity, as well as better planning to carry out sufficient and sustainable investments in human capital, especially at a young age when returns are highest.

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Mr. Lu Mai highlighted the Chinese experience in using grassroots interventions to address problems of inequity by investing in children’s wellbeing.

Some grassroots-level initiatives have had very good results, including the Mama Schools program, which couples a small cash transfer with a parenting skills program that includes risk management, education skills, and the importance of breastfeeding, and the Rural Kindergarten program, where 1,100 rural kindergartens were set up and volunteer-operated. Other experimental programs include breastfeeding promotion programs, e-learning in rural primary schools, and nutrition supplements for pregnant women.

When successful, Mr. Lu added, this experimentation process turns into policy. For example, the preschool nutrition program started in 2007 and showed very clear results in terms of reduced stunting with 800 RMB investment per child annually. Over time, these policies translated into better results for children, and subsequently reduced inequities, but this required a good understanding of the policies and of the policymaking process, strong cooperation with local government, and wide support from all sectors of society, including international organizations.



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4. Linking policy frameworks, research, and data for cognitive capital

Current and future research questions for cognitive capital for Children was discussed in a panel moderated by **Dr. Sarah Cook, Director of the Innocenti Office of Research**, with **Professor Fang Xiaming, Professor Zhao Kun** and **Mr. Di Donghui**.

The panel suggested more research and data on the extent of violence against children in China and its implications for cognitive capital, noting that it is a serious issue that is the focus of much research internationally but under-documented in China.

Accurate data regarding government spending in different areas and the specific needs of different households is necessary in order to ensure that resources are being used efficiently and effectively to address the overlapping needs of households.

Some crucial areas remain relatively unaddressed due to the lack of appropriate data. For example, the panel discussed studies from the University of Wisconsin showing that children's emotional development, memory development, learning ability, interpersonal skills, emotional control, criminal tendencies, mental and physical health, as well as other areas of their development, are impacted by violence during childhood. Violence against children also has economic costs because of the burden it represents to the health system and society. However, data on the incidence and scale of violence against children is scarce in many countries including China.

In other cases the research is available but it is not influencing policy. For example, although research has very firmly established that exclusive breastfeeding during the first six months is essential to cognitive capital development, in many parts of China and elsewhere maternal leave is only four months.

The panel called for a focus on policy-oriented research and data, and on establishing a robust and integrated framework for incorporating them into policy-making, adding that cognitive capital can and should inform such a framework. They proposed a framework for linking research and policy focused on selecting the interventions which have the highest return on investment. This should be done by identifying outcome gaps, looking at the most robust available evidence regarding interventions to address them, both in China and internationally, and selecting those interventions with the highest return on investment.

Measuring the success of cognitive capital interventions

Evaluating and measuring the success of cognitive capital interventions is complex and multidimensional as results take time, in some cases decades, to become apparent, and results in different areas may manifest themselves at different times. Programs should not be abandoned because of poor short term results, but rather evaluated at regular intervals, with interval size dictated by the nature of the intervention.

The panel noted indicators tailored to context to evaluate each programme are important and should be done at the design stage, requiring clarity on what outcomes the intervention is trying to affect. For example, China needs a tailored approach that measures the qualitative aspects of life-long improvements.



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Measuring the impact of cognitive capital-focused policies requires a combination of programmatic evaluations, which can help determine whether and how programmes can be scaled up. Longitudinal surveys to track changes in outcomes over time are essential, as is the need for more data and larger sample sizes, tailored to many different interventions.

– Panel discussion

The road ahead: what to focus on in building cognitive capital

The panel emphasized the need to invest in the community more broadly to create environments that are conducive to cognitive capital development.

The panel suggested China should have a two-fold focus on nutritional support and healthcare delivery, and a basic package beyond "Dibao" (the Minimum Living Standard Guarantee System) for children in their first 1,000 days, given that families have limited resources to access proper healthcare and guaranteed nutrition at this stage. Class solidification is a real danger: families who live in disadvantaged situations with widespread poverty or violence are often driven to make choices that cement them in those situations and make it considerably more likely that their children will also live in poverty, hindering their ability to develop their cognitive capital. For example, new mothers in poor rural households may be forced to go back to working long hours in the field a few weeks or months after giving birth, hindering their ability to breastfeed exclusively and with it their children's full cognitive development.

Finally, the panel called for more work on fitting policies to guarantee a minimum basis for children in the budget process, and on investment mechanisms to finance multidimensional interventions, making them more efficient. They pointed out China's fragmentation in government programs can be due to spending trade-offs. Ministries responsible could coordinate to determine ECD and cognitive capital investment priorities to make the case to the Ministry of Finance for budget allocation increases. This is where an ECD coalition could be useful.

The panel moderator Dr. Cook summarized the main points for the session, noting that the panel had discussed several topics, such as: 1. The need to increase research on areas that are not well documented in China but are relevant to cognitive capital, such as violence against children; 2. The importance of finding better ways of establishing the impact and evaluation of pilots and programs; 3. The need for stepping up efforts to put in place longitudinal studies and building longitudinal



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datasets to study the impact of cognitive capital interventions over the life cycle; 4. Establishing robust, evidence-based frameworks to design, finance, and implement programmes and pilots.

5. Bringing it all together: main conclusions



By investing equitably in children's cognitive capital, we not only benefit today's children but tomorrow's national progress.
- Dr. Noble, UNICEF China Deputy Representative

Dr. Douglas Noble, UNICEF China Deputy Representative, explained that the conference provided a comprehensive picture of the concept of cognitive capital as an organizing framework for policy interventions that help realize children's rights. One of the main messages of the opening session was the critical importance of investing in the early years, as brain development is faster during the first three years than any other period in life.

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An integrated package of interventions beginning from pregnancy and throughout the early years is needed to ensure children's optimal brain development. The conference stressed the importance of national policy and brought families to the forefront, both as agents of children's cognitive development and as a focus for integrated, evidence-based interventions.

The conference also stressed the importance of ECD and cognitive capital as the foundations for sustainable development. ECD investments have huge returns, as large as 7 to 1, so making sure every child benefits and fully develops their cognitive capital is paramount to break intergenerational cycles of poverty and strengthen nations. This is particularly relevant to China, at a time when there is the challenge of sustaining growth by keeping labor productivity rising faster than dependency ratios.

Dr. Noble noted that the conference had highlighted the key areas of work that all stakeholders need to engage in to improve cognitive capital for children. He pointed out that one such area is to continue the scientific dialogue



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on brain development and research. Improving our understanding of how different environments, contexts, and stimuli affect children’s development is needed in order to design more effective and efficient interventions.

A second area is making sure that policy interventions to foster cognitive capital are put in place. This requires working with government to improve social protection systems and social services, using the most efficient instruments to deliver an integrated package of interventions and basic services. It also requires working with sectoral ministries to make the case for equitable investment in children, and working closely with finance ministries to make such investment a reality.

He also noted that a recurring theme throughout the conference was the need to use analytical tools and high-quality evidence to monitor and evaluate programmes and interventions continuously in order to improve them and systematically increase their impact over time. This requires short-term monitoring and evaluation of programs and pilots, as well as developing contextualized, large scale, longitudinal data sets to evaluate outcomes over time.



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