

Transforming Learning in Cities

The Global Cities Education Network Inaugural Symposium



Partnership for
Global Learning

A GLOBAL CITIES EDUCATION NETWORK REPORT



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Global Learning

**Transforming Learning in Cities:
The Global Cities Education Network Inaugural
Symposium**

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FOREWORD

Globalization of the economy, increasingly diverse and interconnected populations, and rapid technological change are posing new and demanding challenges to individuals and societies alike. School systems are rethinking the knowledge and skills students will need for success and the educational strategies and systems required for all children to achieve them. In both Asia and North America, urban school systems are at the locus of change in policy and practice – at once the sites of the most critical challenges in education and the engines of innovation needed to address them. Therefore, Asia Society organized the Global Cities Education Network, a network of urban school systems in North America and Asia to focus on challenges and opportunities for improvement common to them, and to virtually all city education systems. A critical element of high-performing school systems is that they not only benchmark the practices of other countries, but they systematically adapt and implement these practices within their own cultural and political contexts. The Global Cities Education Network is intended as a mechanism for educators and decision-makers in Asia and North America to *collaboratively* dream, design, and deliver internationally informed solutions to common challenges with which education systems are currently grappling.

The Network engages in cycles of in-depth inquiry, planning, and action to address specific topics related to the themes of **transforming learning and achieving equity**. Each cycle involves knowledge sharing and problem solving, including at Global Cities Education Network Symposia and the production of research and knowledge products such as case studies, background papers, and meeting reports. The overarching goal is to develop practical wisdom from the research and experience of the world's leading experts which reflects proven or promising efforts in Network cities, that can be used to enhance the effectiveness of Network and city school systems world wide.

The first meeting of the Global Cities Education Network took place in Hong Kong on May 10-12, 2012 and included participating cities: Chicago, Denver, Hong Kong, Melbourne, Seattle, Seoul, Shanghai, Singapore, and Toronto. Also participating was the EdVisions school network of primarily urban schools operating across several U.S. states. Participants identified several common, high priority problems of practice and agreed to initially focus on two: the need to develop and sustain a high-quality teaching force, and the need to improve educational outcomes for low performing and linguistically and culturally diverse students. This report includes summaries of the background presentations during the meeting by the Rand Corporation and the OECD (Organisation for Economic Co-operation and Development), discussions by members, and examples of best practices in Network cities. This report compliments the two reports prepared as background materials: *Teaching and Learning 21st century Skills: Lessons from the Learning Sciences*, by Anna Rosefsky Saavedra and V. Darleen Opfer, The RAND Corporation and *Equity and Quality in Education: Supporting Disadvantaged Students and Schools*, by the OECD.

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We hope that this series of reports provides knowledge and experience useful to cities in Asia, North America and elsewhere eager to create the conditions that will promote success for all students in today's interconnected world.

Tony Jackson, Vice President, Education, Asia Society

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INTRODUCTION

The 21st century will be the century of cities, according to some global economic leaders. Certainly, the world today is characterized by explosive growth of both mega- and middle-weight cities. Today, half of all people on earth live in cities. In North America, eighty percent of the population already lives in large cities, while the current scale and pace of urbanization in Asia is unprecedented. Massive migrations from rural areas and across international borders have made cities increasingly diverse, typically including multiple languages, ethnic, and/or religious groups. With rapidly growing populations of poor, often unskilled residents, aging populations needing care, and overtaxed public services, large cities are the sites of societies' greatest challenges. But they also possess significant advantages in terms of wealth, cultural offerings, and social opportunities. They are the creative hubs of economies and societies, the dominant drivers of both US and global economic growth. Over the next fifteen years, according to a McKinsey Global Institute report, six hundred major cities will account for more than sixty percent of the world's gross domestic product (GDP) growth.

Cities vary in their resilience and capacity to adjust to new challenges, with the fortunes of some rising and some declining over time. As knowledge- and innovation-based economies become more dominant, a critical factor in determining cities' future economic success will be the skills and talent of their workforces. And as cities grow in population size and diversity, their social harmony will largely depend on their ability to provide equitable opportunities to all groups. In a world that is increasingly interconnected, individuals and cities must be able to compete and cooperate on a global scale, in order to succeed.

These growing challenges brought representatives from cities in Asia, Australia, and North America to Hong Kong for the inaugural meeting of the Global Cities Education Network. Founded and convened by Asia Society, an international, nonprofit educational organization, the Global Cities Education Network seeks to facilitate collaborative learning and problem-solving between large urban school systems.

In recent years, as the role of education in driving economic and social development grows ever more apparent, international benchmarking of educational best practices has become an increasingly valuable tool for policymaking. Until now, these international education comparisons have been made primarily at the national level. While education policies are usually set at the national or state level, it is in cities that such policies are actually implemented in real schools and with real students.

Teams of policymakers, practitioners, and researchers from Chicago, Denver, Hong Kong, Melbourne, Seattle, Seoul, Shanghai, Singapore, Toronto, and the American charter network EdVisions came together in the Global Cities Education Network to discuss the critical challenges they face and to identify ways to learn from each other and from the world's best practices. This first meeting was, in a sense, an experiment. Although good ideas travel across cultures, these cities are very disparate. Seoul's context is not the same as Chicago's. Would they find common ground?

The meeting took place from May 10 to May 12 in Asia Society's Hong Kong headquarters, a new, sleek building in the Admiralty district. The conference center includes a modern, glass-walled facility that links to restored nineteenth-century buildings by dramatic elevated walkways over a patch of jungle. The center's preserved natural habitat, repurposed heritage buildings, and bold contemporary architecture epitomize the dynamism and innovation of modern global cities. Hong Kong was an especially apt location for this first meeting since the city has undertaken fundamental reforms over the past decade. Conference participants had the opportunity to visit Hong Kong schools during their stay.

The meeting delegates discussed two critical sets of issues: achieving quality education for *all* students and retooling their education systems to develop the knowledge and skills needed in the twenty-first century. Background papers were presented at each discussion, to summarize international research on the topic. The cities shared their successes and failures, raised questions about possible options and trade-offs, and identified priority areas where they want the Global Cities Education Network to provide deeper analysis of international best practices.

ACHIEVING EQUITY AND QUALITY

The highest-performing education systems are those that combine quality with equity. In these systems, the vast majority of students have the opportunity to attain high levels of skills, regardless of their own personal and socioeconomic circumstances. Yet even in the highest-performing systems, a significant number of students fail to achieve a minimum level of education.

The long-term costs of educational failure are high both for individuals and societies. In every country, children of wealthier and better-educated parents do better in school than children of poorer or less-educated parents, but studies by The Organisation for Economic Co-operation and Development (OECD)'s Programme for International Student Assessment (PISA) shows that the highest-performing systems reduce the impact of socioeconomic status on educational achievement, creating societies that are open to talent from any source. Low-performing systems, on the other hand, follow policies and practices that tend to magnify the effects of socioeconomic status. As a result, a segment of the population lacks the skills needed to function productively, driving up health, welfare, and crime costs and weakening social cohesion. In the United States, for example, the large inequalities in educational attainment, including high school dropout rates, cost the society an estimated three trillion dollars, the equivalent of a permanent recession.

Every city in the Global Schools Education Network is working to provide greater equity in its education system, some with more success than others. Andreas Schleicher, Deputy Director of Education at OECD, led off the discussion of equity and quality by reviewing a number of OECD studies that synthesize research and best practices from around the world on these issues. (See the background paper *Overcoming School Failure: Policies that Work* on AsiaSociety.org/Education).

He emphasized that high-performing systems:

- invest and intervene early in children’s learning
- provide effective support to low-performing and disadvantaged schools
- eliminate system-level obstacles that can hinder equity

High-performing Systems Invest Significantly in Education through Upper Secondary School

Students’ performance on PISA assessments of reading, math, and science at age fifteen is a strong predictor of participation in post-secondary education, which itself leads to better employment prospects, higher lifetime earnings, and greater social and economic contributions to the community. The benefits of effective investments in schooling clearly outweigh the costs. But it is not just a question of more resources—the systems with the highest expenditures are not necessarily the systems with the highest performance—but of more effective use of resources.

High-performing Systems Provide Effective Support to Low-performing Students and Disadvantaged Schools

Schools serving high concentrations of disadvantaged students often lack the internal capacity to improve, as school leaders, teachers, and the overall classroom and local environments frequently fail to offer a high-quality learning experience. But research from many parts of the world shows that a range of practices at the school level can significantly improve performance in schools serving disadvantaged students. City systems ought to consider the following points:

- Attracting strong school leaders, then training and supporting them through mentoring and peer networks are proven key factors in launching a school’s transformation.
- Strong school leaders are also essential to developing safe school climates and learning environments, with high expectations and a sense of connectedness between teachers and students.
- Attracting, supporting, and retaining high-quality teachers is often difficult in these schools, but is critical to improving learning outcomes for disadvantaged students.
- Employing research-based and diversified pedagogical strategies will help schools address the wide variety of learning needs.
- Linking schools with parents to increase their engagement, and connecting schools with community organizations, can provide a range of social, medical, and learning supports.

High-performing Education Systems also have Strong System-level Policies that Promote Equity

These policies include eliminating grade repetition and reforming school structure to postpone tracking until upper secondary school. Both grade repetition and early tracking have been shown to increase inequity and the influence of socioeconomic background on student achievement. Basically, whenever a classroom or school has the ability to hand a lower-achieving student to someone else, it leads to increased inequity. Equity-oriented systems also target additional resources toward the education of lower-income students, such as additional supports for schools with large numbers of disadvantaged students or higher per-pupil allocations for low-income students. Investments in early childhood education also demonstrate long-term educational benefits, so many systems are expanding their investments in these programs. Allowing parents greater choice of schools is a growing trend, but such mechanisms must be well-designed and carefully managed to avoid creating additional inequities. Finally, to ensure completion of upper secondary education, upper secondary pathways should be designed to emphasize more work-oriented skills. These programs must be equivalent in quality to the traditional academic pathways in order to keep students in school and lead them to post-secondary education and training opportunities.

All of the cities participating in the Global Schools Education Network have put major efforts into promoting equity, and they discussed their successes and continuing challenges. Below are some examples:

Shanghai is the leading educational province in China, and has pioneered reforms in curriculum, assessment, and equity that are being emulated elsewhere in the country. The enormous social transformations in China which have led millions of families to migrate to cities created huge disparities between the quality of schools in central Shanghai and those in the suburbs or outlying areas where migrant families live. For the past ten years, the Shanghai Education Commission has focused on bringing up the bottom-tier schools through a collaborative strategy: Principals and teachers from high-performing schools work with weaker schools on improving management, school culture, and teaching quality. The approaches have included principals running multiple schools; pairing of schools; clustering schools to share teaching resources; and commissioned administration, through which high-performing schools receive funds for a two-year period to improve the performance of weaker schools. In addition, Shanghai has well-developed mechanisms for sharing best practices across schools, such as the teaching and research network through which senior instructors develop and disseminate practice improvements across the city. After a decade, the weaker schools have improved significantly, a development that contributed to Shanghai's strong performance on PISA in 2009. The city's current major challenge is a fundamental shift away from the traditional, didactic knowledge transmission education system, driven by public examinations, to a practice that nurtures students' talents, interests, and creativity.

Toronto began a major education reform in 2004. It focused on increasing mastery of literacy and numeracy in elementary school, reducing the dropout rate from secondary school, reducing the number of low-performing schools, and increasing public confidence in schools. The fundamental approach was to build capacity in schools. Elementary teachers received extensive professional development on key

instructional approaches in literacy and numeracy, with literacy coaches employed in many schools. At the secondary level, student success officers and school teams used data to identify potential dropouts and developed individualized educational and support mechanisms to keep the struggling students in school, including the development of special “skills” majors. The city also worked to strengthen school leadership, devising two years of mentoring for new principals; clear learning, development, and evaluation plans; and succession and talent-development plans so that momentum was not lost when principals left. As a result of all these measures, the reforms increased the proportion of students achieving the sixth-grade standard from fifty-four percent in 2004 to sixty-eight percent by 2010, and had increased high school graduation rates from sixty-eight percent in 2004 to seventy-nine percent in 2009. The reforms also reduced the number of low-performing schools from twenty percent to less than five percent. The attrition rate of new teachers dropped by two-thirds in the same period. Despite these notable successes, achievement gaps still persist for certain groups. As Toronto seeks to transform learning for the 21st century, its key challenges include reducing these achievement gaps and making its increased cultural diversity an asset in promoting a more global outlook.

Denver has made considerable progress in raising the achievement of students from low socioeconomic status backgrounds. Setting high expectations for all students and creating a norm of successful schools has been an important culture change. More resources have been directed to lower-income students and incentives were created for teachers and principals to work in lower-income schools. Magnet schools had been used to attract middle-class families back to the city schools, but these generated new forms of inequity. Now the city works toward strong schools in every neighborhood, with larger enrollment zones to create more heterogeneous schools. Denver has also experimented with charter schools to create competition in areas where schools were weak. This has led to a reduction in the number of low-performing schools, an increase in achievement levels of students from low socioeconomic backgrounds, and a twelve percent increase in city-school enrollments as middle-class families return to those campuses, especially to elementary schools. Denver’s main ongoing challenges are the need for higher-quality instruction and support for English-language learners (who now constitute forty percent of the student body) and the need to get high-quality teachers into poorer schools.

Melbourne’s performance has flattened over the past decade, in contrast to the fairly high performance of Australian schools in general, and the overall upward trajectory of Asian systems. Melbourne’s education system incorporates three school sectors: government, Catholic, and independent schools. As Melbourne’s population has grown and diversified, so too have the students across these three sectors, with one quarter of all students now from a home where English is a second language. In recognition of the increasingly complex needs of Melbourne’s school communities, extended school hubs now operate across clusters of government schools. These hubs are based on local partnerships between schools, local community groups and members, and government and private sector organizations working to support students and their families’ health, wellbeing, and engagement in learning.

In the 1990s, responsibility for government schools devolved considerably to the local level. The focus of reform efforts for the past ten years across all three sectors has been building workforce capacity in schools and strong system leadership. Within the government sector, the Bastow Institute of Educational

Leadership provides courses and other opportunities to develop skills that allow education leaders to work effectively with their communities, to be innovative in driving school improvement, and to support them in making evidence-based decisions. Almost six thousand current and aspiring system leaders have participated in Bastow courses since 2010. The government system also created the Executive Class Principal (or “super principal”) position. Although few in number (around thirty at present), these “super principals” have made a significant impact. They have turned around student learning outcomes in low-performing schools and created a culture of excellence in some of Melbourne’s newest schools.

The Catholic Education Office Melbourne is also establishing a Leadership Centre to support the development of leaders and practitioners through a range of high-quality professional development programs. These include formally accredited programs and a flagship Masters of Leadership degree in partnership with Australian Catholic University. Independent Schools Victoria has a similar focus on building leadership, with a highly regarded Development Centre. The Centre provides professional learning services for teachers from early childhood to senior secondary, many of which are open to teachers in Catholic and government schools as well. Leadership development is also emphasized, with programs ranging from seminars for early years educators to programs for both new and experienced principals.

Finally, the Victorian government has made a significant investment in a new information management system, the Ultranet. Through the Ultranet, teachers can share best practices, access student information, and offer tools to help plan and deliver curriculum tasks online. Students, meanwhile, can submit work, receive feedback, and track their learning progress. Parents can get detailed and timely information to monitor and support their children’s progress.

Education in Australia is a highly contested space, with a diverse range of interested parties and stakeholders involved in policy and resourcing discussions. As Melbourne’s education system moves forward, a key challenge will be to balance the policy priorities and directions of the federal and state governments, and education community stakeholders.

Chicago, like many large American cities, faces enormous challenges. It has large numbers of low-performing students and although scores on state tests have increased, the standards are so low that little improvement has been achieved over the past ten years. The problems are compounded by demographic change, which has left some schools half-empty and others overcrowded, as well as a large looming budget deficit. The new mayor plans to lengthen the school day, raise standards, and create instructional leadership teams in each school to work with teachers to meet the standards. Chicago does have some successful and rigorous “magnet” or selective enrollment high schools; these have proven very popular and have long waiting lists of eligible students. One current strategy is to create a portfolio of many different types of schools, with each school excelling in a particular area, so that students have many good choices. To accomplish this, Chicago needs a new pipeline of outstanding school principals, since the city needs about 150 new principals each year.

Discussion: Achieving Equity and Quality

During the wide-ranging discussion that followed the city presentations, a number of practical issues were raised that cities wrestle with, but that lack definitive research. For example: How much early childhood education is necessary to have a significant impact on achievement? At what age should early childhood programs begin in order to get maximum benefit on the extra dollar? What are effective ways to get high-quality teachers into disadvantaged schools and how can system leaders work constructively with teachers' unions on this issue? What is the relationship between hours of studying (including after-school tutoring) and academic achievement? Do more personalized learning designs increase or reduce inequity?

The definition of equity is also evolving. Should the focus of the definition be on resources? Opportunity? Outcomes? Achieving equity is often discussed in terms of reducing or eliminating achievement gaps between groups, but is that realistic? For instance, in Denver, the achievement gap has not been closed despite advances in the lower tier of students because the top-scoring students have also improved. In Singapore, the policy is to protect the bottom-tier students while allowing the top-tier students to soar as high as they can.

The discussion also centered on the increasing diversity of cities. Even cities that adopted many of the measures outlined in the OECD background paper are finding that the intensification of diversity makes success more difficult. In Toronto, for example, more than twenty percent of the population was born outside of Canada (and are referred to as "new Canadians"). Despite the overall increase in student performance and secondary school graduation, there are still groups that are falling behind, especially black males, native Canadians, and students who have come from Latin America and the Middle East. In Melbourne, meanwhile, twenty-four percent of students have one parent born overseas and twenty percent speak a language other than English at home. In Denver, the proportion of students who speak a language other than English at home has risen to forty percent. Some time ago, Seattle implemented a voluntary desegregation plan, but its increasingly diverse demography is mirrored in its uneven achievement patterns. In Shanghai and Hong Kong, massive migration from poor rural and inland areas poses challenges to the traditional urban schools. And while Seoul's diversity is small in scale (two percent) compared to that of other cities, it nevertheless challenges the traditional processes of the city's education system.

Most cities give more resources to schools serving disadvantaged students, but the quantity of resources may not be as important as the ability to have the best teachers working in these schools. Recognizing that teacher quality is the single biggest in-school factor affecting student achievement, the conference addressed how to get enough high-quality people to become teachers and how to ensure that the neediest students have access to the highest quality teaching.

Two recent International Summits on the Teaching Profession, which brought together education ministers and teachers unions, focused on some of the world's best practices for recruiting academically talented people into teaching, training them with the tools to deal with diverse students and abilities, mentoring new teachers, and developing and retaining teachers in the classroom, especially in challenging

schools. But cities need more specific information on how to implement strategies to improve their teaching force. Some cities, such as Singapore, have extensively pursued the development of a high-quality teaching profession. Other cities have worked on specific aspects of the issue, such as Shanghai's efforts to get the best teachers into the weakest schools. These efforts and others could be used to inform other cities' choices.

Another trend in most of the cities was greater choice and options for different types of schools. Singapore, for example, is developing portfolios of schools. Melbourne has government, Catholic, and independent schools. In the United States, charter schools, such as those in the EdVisions network, are increasingly part of the city mix. Seattle pushed a great deal of decision-making to the school level, which has stimulated innovation but exacerbated inconsistent results. All of the conference's participating cities are moving toward greater decentralization of authority to the school level, with broad policies set at the city or district level. However, choice and decentralization can lead to greater inequities if not designed with equity in mind. So the challenge in running an effective urban system of schools is: What needs to be consistent across schools and where can flexibility be allowed?

Despite their challenges, urban schools also have many advantages. Often the broader cultural and economic environment for education is more favorable. Particular approaches, such as choice among schools or professional learning communities among teachers, are easier to implement in a city than in a rural area. Indeed, an analysis conducted by OECD showed that in many parts of the world, cities outperform non-urban parts of their countries.

TRANSFORMING LEARNING: KNOWLEDGE AND SKILLS FOR THE 21ST CENTURY

The pace of change around the world is increasing exponentially. Economies have changed. Societies have changed. Technology has changed. Only our schools are recognizably similar to those of another era. As cities seek to modernize their economies, they need to prepare their students for the new and unpredictable world of the future, where many jobs have not even been invented yet.

Around the world and certainly in each of the participating cities, there is a sense that the aims and processes of education in the 21st century need to be fundamentally different from those in the twentieth. What knowledge and skills are most important in diverse, globally interconnected, innovation-oriented economies and societies? Providing basic literacy skills for the majority of students and higher-order skills for a few is no longer an adequate goal. The skills that are easiest to teach and easiest to test are also the skills that are easiest to automate, digitize, and outsource. The so-called 21st century skills are of mounting importance but they are much harder to develop. (These skills are also known as higher-order thinking skills, deeper learning outcomes, and complex communication skills.)

The definition of these higher-order skills and their balance among various abilities, knowledge, and values varies from place to place. The Assessment and Teaching of 21st Century Skills Consortium

(which includes representatives from Australia, Finland, Portugal, Singapore, the United Kingdom, and the United States) provides one widely used definition. It divides 21st century skills, knowledge, and attitudes into four categories:

- ***Ways of thinking***: creativity, innovation, critical thinking, problem-solving, decision-making, and learning to learn
- ***Ways of working***: communication and collaboration/teamwork
- ***Tools of working***: including information and communication technology
- ***Living in the world***: citizenship, life and career skills, and personal and social responsibilities, including cross-cultural awareness and competence

To lead off the discussion of education for the future, Darleen Opfer and Anna Saavedra of the Rand Corporation reviewed the growing literature on 21st century skills. (See Rand's background paper, *Teaching and Learning 21st Century Skills: Lessons from the Learning Sciences*, on AsiaSociety.org/Education.) Using nine lessons from the "science of learning," they asserted that learning environments need the following approaches to promote 21st century skills:

1. Make learning relevant.
2. Teach through the disciplines.
3. Simultaneously develop lower- and higher-order thinking skills.
4. Encourage transfer of learning.
5. Teach students explicitly to learn how to learn.
6. Address misconceptions directly.
7. Promote learning through teamwork as both process and outcome.
8. Exploit technology to support learning.
9. Foster students' creativity.

In the 20th century, education centered on a relatively fixed body of content. All the participating cities were in agreement that this "knowledge transmission" model of education is no longer adequate. Today, when knowledge itself changes rapidly and people can access unlimited content on search engines, students need to become self-directed, lifelong learners.

Every city is engaged in or contemplating wide-ranging reforms of curriculum, instruction, and assessment to prepare students for the increasingly complex demands of life and work in the 21st century. They shared their experiences in trying to move their systems towards 21st century learning environments.

Hong Kong has undergone a decade of major education reform. Starting in 1999, spurred by fundamental social and economic changes, Hong Kong implemented a comprehensive overhaul in the structure, curriculum, language of instruction, and assessment both in schools and higher education. The learner-centered reforms underlying this new system have been far-reaching. They involve significant expansion of educational opportunity and a shift of emphasis from teaching to learning, from fact memorization to development of learning capacities.

Reforms included the abolition of the end-of-primary school exam to encourage more active learning; the replacement of traditional subject matter in secondary schools with “learning areas;” the system-wide development of “liberal studies,” which promotes interdisciplinary studies and project-based learning; and the introduction of “applied learning,” which enables students to gain real-life experience within different sectors of the economy. The reforms have shown considerable success. Hong Kong primary students rose from fourteenth place in reading in the 2001 Progress in International Reading Literacy Study assessment to second place on this exam in 2006. Hong Kong also scored second overall on the PISA assessment of fifteen-year-olds in 2009. Still, there are significant tensions in the system. For instance, it has been challenging to shift teachers from a knowledge-transmission teaching tradition to more active pedagogy, and to balance an innovative curriculum with an intense parental focus on admission to the best higher education institutions, fueled by a large private tutoring industry.

EdVisions, a network of charter schools in across several states, has no courses, classes, or bells. Education is completely personalized around student-designed projects which follow students’ interests and through which the required subject matter standards are acquired. Teachers are called “advisors;” they act as a “guide on the side” rather than a transmitter of knowledge. Both advisors and other students assess student projects using standard rubrics. The schools are organized around the principles of student engagement, mastery, choice, and voice. One challenge to this learning environment model: Students are behind on conventional state-required mathematics tests.

Seattle’s approach to twenty-first-century skill acquisition has sparked the creation of internationally themed schools within the public school system. These schools grew out of surveys of parents and businesses about what kind of education they wanted for their children and what knowledge and skills would be needed to prepare them for the changing society and economy of the future. The city started with one internationally themed elementary school in 2000, and there are now eight international schools, with a goal of twelve, including elementary, middle, and high schools. The schools emphasize either full- or partial-immersion in one or more world languages, the study of global issues, and service learning both locally and globally. Community partnerships with business, universities, and parents have been essential to the schools’ development, and technology is used extensively to link schools to other countries.

The international schools aim to produce students who can be successful citizens in both local and global settings. The main challenges Seattle faces in implementing these international schools include: expanding teachers' knowledge; balancing the development of basic competencies with the development of 21st century skills; spreading best practices from these models to other schools in the system; and assessing global competencies. Asia Society's International Studies Schools Network of thirty-three schools in eighteen US cities is another example of schools being designed for the future. Their aim is to produce students who are college-ready and globally competent.

Singapore has had a very strong knowledge-transmission education system that consistently ranks among the world's best on international assessments. However, its education philosophy and practices are continuously evolving. In 2004, the "Teach Less, Learn More" policy promoted a different learning paradigm, one more focused on engaged learning. In 2008, a Primary Education Review further pushed for a better balance between knowledge transmission and the development of skills and values; this led to the introduction of more art, music, and physical education. At the secondary level, a portfolio of schools is being developed with different themes, including art, music, and sports, to encourage students' different interests and talents.

Singapore has developed its own framework of 21st century competencies, which are being infused into curriculum development for each discipline and into the redesign of teacher preparation. In moving in this direction, Singapore is determined to widen teachers' pedagogical repertoires and getting both basic and 21st century skills to high levels, since ultimately students will need both. The city also wrestles with how to assess 21st century skills (since they need to be assessed over time and inevitably involve some subjectivity) and whether they should be assessed in a high-stakes or low-stakes forms.

Seoul's representative spotlighted the constraints on twenty-first-century skills imposed by test-driven education systems. In Seoul, students excel at knowledge transmission, as is evident in Korea's outstanding performance on all international assessment measures. However, students are not happy or engaged with their own learning. Korea now wants to focus on competence and creativity, not just knowledge regurgitation. Its initiatives in this direction include STEAM, which attempts to link the science, technology, engineering, and math (STEM) fields, in which Korea is traditionally strong, with the arts. STEAM programs are now in all elementary and middle schools. Part of the middle-school day has also been opened up to locally developed curriculum innovations to encourage creative expression, teamwork, and the like.

There is also a more explicit focus on communication skills to counteract Asian students' traditional fear of being wrong. To this end, Seoul began to implement internally developed curriculum innovations within schools, to encourage creative expression and teamwork. Cooperation and creativity are fostered through reading, essays, and discussions between students and teachers, as well as peer-to-peer discussions. Furthermore, the reworking of the student evaluation process helps create an assessment based on creative solving processes rather than memorization. Finally, to ensure that students of the 21st century are well-rounded and sociable individuals, schools are implementing a "renaissance" of cultural

arts and physical education programs. These new programs include “one child, one instrument” and a variety of after-school sports clubs available for students of all levels.

Discussion: Transforming Learning

While there was real agreement among the cities on the general direction in which education needs to go, there are tremendous challenges of implementation, and each city approaches the task with different strengths and limitations. Asian cities have developed highly effective systems for knowledge transmission, where all the elements of the system are aligned and produce strong test results, but their pedagogy is more traditional. Western cities, on the other hand, have a more developed tradition of constructivist pedagogy and more freewheeling societies. While their schools are renowned as “peaks of excellence” these cities have been less effective in developing systems to get all students to high levels of achievement.

Despite these differences, cities share many similar constraints in moving towards 21st century learning environments. For any school system, the knowledge transmission model is much easier to implement. And while the goals of education for the 21st century may have changed, most assessment and accountability systems have not. So there is a major tension between the rhetoric of 21st century skills and the reality of schooling. Systems assert that they want to develop creative, confident students who are adept in a range of areas, but then they test more basic knowledge-transmission skills. This sends mixed messages to teachers about the skills and interdisciplinary content that students need, since these may differ from what is valued on examinations and assessments for which teachers and students are held accountable.

Many cities are experimenting with new forms of assessment. These include greater use of formative assessments, which teachers use to remind students of their learning goals and to guide progress, as well as performances, portfolios, and project- and problem-based forms of measurement. These assessments are more complex to administer, call for more skill on the part of teachers, and are harder to standardize than traditional knowledge-transmission tests. They are also not necessarily accepted by parents. Parents tend to be more comfortable with traditional forms of assessment to judge how well children and schools are doing, and they may not necessarily understand the new skills that are needed for modern economies.

These are not small changes that are being called for, issues that could be handled through modestly scaled professional development courses. Nor are they altogether new skills; these types of skills have always been a part of the education of elites. But to teach these skills to all students will require the restructuring of whole systems—from teacher preparation and professional development, to curriculum design, to assessment and accountability measures, to the expectations of parents and consumers of education systems. And they will need very high-quality teachers to transform the learning culture of schools.

The rapid changes in knowledge today also put a greater premium on investing in lifelong learning, raising new questions not just about the goals and focus of schooling but also about how to distribute learning resources over the lifecycle. Every city faces critical challenges in trying to reduce the enormous gap between what modern societies and economies demand and what education systems currently deliver.

COMMON PRIORITIES

In the final sessions of the meeting, representatives identified their city's individual priorities and then agreed on a number of key common priorities of policy and practice where international benchmarking efforts through the Global Cities Education Network would be particularly helpful.

1. Developing High-Quality Teachers and School Leaders

Recognizing that high-quality teachers are the critical ingredient in student achievement, cities want to know how to improve their efforts to attract, hire, develop, evaluate, and retain high-quality teachers. They also want to ensure that the most disadvantaged students have highly capable teachers. Two International Summits on the Teaching Profession have discussed these issues at the country level, but cities need more specific analyses of their situations and the strategies they could utilize to improve the quality of their teaching force. Some cities have done significant work on these issues that would be useful to others. Since cities differ in the degree of influence they have over certain aspects such as teacher training and teacher distribution among schools, various strategies for improving quality and distribution need to be identified. Also, efforts to improve the performance of schools, especially lower-performing schools, highlight the critical role of high-quality school leadership. Some members of the Global Cities Education Network have developed new approaches to developing and training principals, while others have fostered various models of distributed leadership that could usefully be analyzed and shared.

2. Improving Achievement of Low-Achieving and Linguistically and Culturally Diverse Students

As discussed at the meeting, most cities have made significant efforts over the past two decades to raise the educational achievement of low-performing students and schools—often with tangible successes. But in every city, some groups of students, usually those from different linguistic or cultural backgrounds, still lag behind. The increasing scale and complexity of migration-driven diversity in large cities makes improving policies and practices in this area an urgent priority. Bringing together the best available international research with a comparative analysis of the approaches of selected cities could shed important light on how the achievement of these students can be improved and how cities can make their increasing diversity an asset.

3. Implementation and Assessment of 21st Skills

Every city tries to varying degrees to modernize the content, methods, and outcomes of their education systems, moving away from primarily knowledge transmission towards 21st century skills and learning environments. However, this is not easy. There are a number of key challenges in implementing these changes. These hurdles include a lack of understanding of the need for change from parents or the general public, and the need to develop teachers who possess both greater depth of knowledge and a wider range of pedagogical skills. One linchpin issue is the need to craft ways to better assess these skills. An analysis of different ways to measure various aspects of 21st century skills, together with an examination of ideas from the world's best research on measurement, would meaningfully help cities transform their systems in this direction.

4. Effective Systems Design: Centralization, Decentralization, and Choice

All the participating cities are moving away from top-down educational management, with its emphasis on tight prescription and uniformity of practice, to giving more autonomy to individual schools. They encourage portfolios of different types of schools and provide more choices of educational paths to students, especially at the secondary level. The mixtures of schools in different cities vary but may include charters, independent schools, schools with different themes, online options, mixtures of school and workplace training, and so on. These approaches respond to students' different interests and needs. They also nurture more innovation than in the past, but they pose significant challenges of equity, quality control, and the dissemination of new best practices to other schools in the system. A major issue of system design revolves around what needs to be centralized and what should be decentralized to address these challenges. Every city grapples with this question to varying degrees, and it would be another fruitful area for comparative work.

APPENDIX I

Global Cities Education Network Inaugural Symposium Asia Society Hong Kong Center May 10–May 12, 2012 Agenda

Thursday, May 10

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|----------------------|--|
| 8:00 a.m.–12:30 p.m. | School Site Visits (optional) |
| 1:30 p.m.–1:45 p.m. | <p>Welcome</p> <ul style="list-style-type: none"> • Tony Jackson, Vice President, Education, Asia Society • Michael Suen, Secretary for Education, Hong Kong |
| 1:45 p.m.–3:00 p.m. | <p>Why Are We Here? Purpose of the Global Cities Education Network</p> <ul style="list-style-type: none"> • Presentation and Facilitation: Tony Jackson |
| 3:00 p.m.–3:30 p.m. | <i>Break</i> |
| 3:30 p.m.–4:00 p.m. | <p>Achieving Equity and Quality in Education: System-Level Policies and Strategies to Improve Low-Performing Schools</p> <ul style="list-style-type: none"> • Presentation: Andreas Schleicher, Deputy Director Education, Organisation for Economic Co-operation and Development |
| 4:00 p.m.–4:45 p.m. | <p>Plenary Discussion</p> <ul style="list-style-type: none"> • Facilitator: Vivien Stewart, Senior Advisor, Asia Society |
| 4:45 p.m.–6:30 p.m. | <p>Strategies to Achieve Equity: Perspectives from Network Participants</p> <ul style="list-style-type: none"> • Participants: Denver, Shanghai, Melbourne, Chicago, Toronto • Facilitator: Tony Mackay, Executive Director, Centre for Strategic Education • Discussant: Linda Darling Hammond, Charles E. Ducommun Professor of Education, Stanford University |
| 6:30 p.m.–6:45 p.m. | <i>Break</i> |
| 6:45 p.m.–8:30 p.m. | <p>Dinner</p> <ul style="list-style-type: none"> • Presentation by Kenneth Chen, Undersecretary for Education of the Government of the Hong Kong Special Administrative Region |

Friday, May 11

8:30 a.m.–9:00 a.m.

Transforming Learning: Teaching 21st Century Knowledge and Skills

- Presentation:
 - Darleen Opfer, Distinguished Chair, Rand Corporation
 - Anna Saavedra, Associate Policy Researcher, Rand Corporation

9:00 a.m.–9:45 a.m.

Plenary Discussion

- Facilitator: Kathy Hurley, Executive Vice President, Education Alliances, Pearson Foundation

9:45 a.m.–10:15 a.m.

Break

10:15 a.m.–12:00 p.m.

Strategies to Transform Learning: Perspectives from Network Participants

- Participants: Singapore, Seoul, Seattle, EdVisions, Hong Kong
- Facilitator: Barbara Chow, Education Program Director, Hewlett Foundation
- Discussant: Marc Tucker, President and CEO, National Center on Education and the Economy

12:00 p.m. –1:15 p.m.

Lunch and Team Discussions

1:15 p.m.–1:30 p.m.

The Global Cities Education Network: How Will It Work?

- Presentation: Tony Jackson

1:30 p.m.–3:30 p.m.

How Should the Network Examine Common Problems of Practice?

- Presentation: Tony Jackson
- Case Studies in Education: Development and Use
 - Tom Boasberg, Superintendent of Denver Public Schools, to present a sample case

3:30 p.m.–4:00 p.m.

Break

4:00 p.m.–5:30 p.m.

What Problems of Practice Should the Network Address First?

- Presentation: Tony Jackson
- Small group discussion and prioritization of topics

5:30 p.m.

Adjourn for Day 2

- Meeting participants have dinner on their own

Saturday, May 12

8:30 a.m.–10:00 a.m.

Priorities and Approach for Network Learning

- Plenary discussion of priorities identified in previous day's small group discussions

10:00 a.m.–11:00 a.m.

Next Steps and Closing Reflections

- Tony Jackson
- Team Leaders

APPENDIX II
Global Cities Education Network
Hong Kong Inaugural Meeting
Attendees*

Chicago

Noemi Donoso
 Chief Education Officer
 Chicago Public Schools

Oliver Sicat
 Chief Portfolio Officer
 Chicago Public Schools

Denver

Greg Anderson
 Dean
 Morgridge College of Education University of
 Denver

Tom Boasberg
 Superintendent
 Denver Public Schools

Bill Kurtz
 CEO
 DSST Public Schools, Denver

Mary Seawell
 President, Board of Education
 Denver Public Schools

Hong Kong

Catherine K. K. Chan
 Deputy Secretary for Education
 Hong Kong Bureau of Education

Kenneth Chen
 Undersecretary for Education
 Hong Kong Education Bureau

Anna Lee
 Chief Curriculum Development Officer
 (Science)
 Hong Kong Education Bureau

Chi-hung Lee
 Chief Curriculum Development Officer
 (Personal, Social and Humanities Education)
 Hong Kong Education Bureau

Sheridan Lee
 Principal Education Officer (Quality Assurance)
 Hong Kong Education Bureau

Ka-shing (Joe) Ng
 Principal Inspector
 Hong Kong Education Bureau

Mavis Poon Chan Shuk-yum
 Chief Quality Assurance Officer
 Hong Kong Education Bureau

Michael Suen
 Secretary for Education
 Hong Kong Education Bureau

Melbourne

John Allman
 Executive Director, Education Partnerships
 Division
 Department of Education and Early Childhood
 Development, Melbourne

Stephen Elder
 Executive Director of Catholic Education
 Catholic Education Office, Melbourne

Michelle Green
 Chief Executive
 Independent Schools Victoria

Carol Kelly
 Executive Director, Student Learning Outcomes
 Department of Education and Early Childhood
 Development, Melbourne

Aine Maher
Director, Education Services
Independent Schools Victoria

Seattle

Christopher Carter
Principal
Seattle Public Schools

Michael DeBell
School Board President
Seattle Public Schools

Susan Enfield
Interim Superintendent
Seattle Public Schools

Karen Kodama
International Education Coordinator
Seattle Public Schools

Seoul

Jae Wook Kim
Head of International Affairs
Seoul Metropolitan Office of Education

Byong-Sun Kwak
Former President and Researcher
Korean Educational
Development Institute

Byung Young Park
Research Fellow
Korean Educational
Development Institute

Shanghai

Lili Jin
Principal Staff Member, Basic Education
Division of Shanghai Municipal Education
Commission

Ji Mingze
Deputy Director, Teaching Research Section
Shanghai Municipal Education Commission

Zhang Xiaofeng
Associate Professor
College of Education, Shanghai Normal
University

Jinjie Xu
Shanghai PISA Center, Shanghai Academy of
Education Science

Singapore

Zhongyi Chen
Planning Officer
Ministry of Education, Singapore

Chua-Lim Yen Ching
Director for Curriculum Planning and
Development
Ministry of Education, Singapore

Cindy Eu
Senior Officer, International Relations
Ministry of Education, Singapore

Wing-On Lee
Dean, Education Research
National Institute of Education, Singapore

Cheong Wei Yang
Director, Planning
Ministry of Education, Singapore

Toronto

Gen Ling Chang
Coordinating Superintendent Teaching and
Learning
Toronto District School Board

Karen Murray
Program Co-ordinator (Beginning Teachers)
Toronto District School Board

Christopher Usih
System Superintendent of Education
Toronto District School Board

EdVisions Schools

Keven Kroehler
 Director of Operations
 EdVisions Schools, Minnesota

Dee Ann Grover Thomas
 Director
 Minnesota New Country School, EdVisions

Advisors, Presenters, and Funders

Kai-ming Cheng
 Professor, Chair of Education and Senior
 Advisor to the Vice-
 Chancellor
 University of Hong Kong

Barbara Chow
 Education Program Director
 William and Flora Hewlett Foundation

Linda Darling-Hammond
 Charles E. Ducommun Professor of Education
 Stanford University

Kathy Hurley
 Executive Vice President, Education Alliances
 Pearson Foundation

Tony Mackay
 Executive Director
 Centre for Strategic Education

*Titles current as of May 15, 2012

V. Darleen Opfer
 Director
 Rand Education
 Rand Corporation

Anna Saavedra
 Policy Researcher
 Rand Corporation

Andreas Schleicher
 Deputy Director Education
 Organisation for Economic Co-operation and
 Development

Jean Sung
 Vice President and Manager, Philanthropy and
 Community Relations, Asia Pacific
 J. P. Morgan

Marc Tucker
 President and Chief Executive Officer
 National Center on Education and the Economy

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Tony Jackson
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Jessica Kehayes
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Heather Singmaster
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 Asia Society

Vivien Stewart
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