

# Toward 21st Century Learning: An Analysis of Top Performing Asian Education Systems' Reforms

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This special issue discusses how top Asian education systems (namely, Korea, Taiwan, Hong Kong, Singapore, and Shanghai) continue to *reform* themselves toward 21st century learning. The papers delve into issues such as systemic structures and mechanisms, leadership, curriculum and assessment, and teachers' professionalism in transforming students' learning dispositions, skills, and knowledge.

International comparative studies, for example the 2007 and 2010 McKinsey reports, identified factors associated with high quality teaching and learning, and a good education system. These factors relate to students, teachers, classrooms, schools, and systemic issues. Students need to be equipped with 21st century skills, which go beyond knowledge to include values and dispositions (Barber and Mourshed 2009). Quality teachers are essential to enact 21st century learning (McKinsey and Company 2007, 2010; Mourshed et al. 2010). Classroom practices emphasize knowledge building, adapting, and applying knowledge to real-life problems (Barber and Mourshed 2009). Moreover, well-informed school leaders provide teachers with resources and autonomy to design and adapt curricular, teaching, and learning for students (Mourshed et al. 2010). Effective systems continuously adapt to change. Systems are aware of its context as it moves from policies to implementations to achieve quality learners (Barber and Mourshed 2009).

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This special issue draws attention to policies and strategies that Asian systems have attempted to remain relevant both presently and for the uncharted territories of the future. It examines how education systems are impacted by interrelating contexts of school, societal demands, and history. It tries to understand how enacted reforms have aligned education systems to 21st century education goals. Papers here discuss each system and (in some instances) compare with other systems by tracing specific or combination of issues relating to the:

- Historical trajectory and its underpinning philosophies;
- Struggles and tensions of balancing between systems' goals, reforms, stakeholders' and individuals' interests;
- Emphasis on learning in schools and beyond through external agencies such as tuition centers and cram schools;
- Key dimensions that enable the system to be performing, for example leadership support, capacity building, pedagogy, and curricular reforms; and
- Future directions and goals.

## Overarching Structure and Outline

The special issue consists of two sections. The first section highlights individual countries, while the second section focuses on papers that compare education systems to understand specific dimensions that led them to what they are today.

### Korea

Kim and Cho emphasize the status that the Koreans experience today is not plain sailing. Their achievements

result from decades of conscious reforms. Rapid developments have also casted “shadows” relating to:

Academic achievements but low interests and happiness in learning;  
 Quality teachers but low morale and job satisfaction;  
 Inequality due to intense competition from shadow education and education gaps between privileged and disadvantaged students; and  
 Poor teaching practices focused on content and less on competencies and dispositions.

So and Kang provide historical and socio-cultural background to explain the overemphasis on curriculum reform and academic achievements that led to these “shadows.”

Kim and Cho stress that in the future Korea needs to diversify excellence by recognizing other talents and students’ well-being. Reforms should provide equal learning opportunities according to aptitude and interests, ensure quality learning by developing school leaders’ and teachers’ capacity for autonomous school management and school-based curriculum, as well as involve stakeholders in decision-making. So and Kang argue that alignment is needed between curriculum reform, implementation structures (such as professional development, teaching practices, assessments, and school culture), and society. Successful reform is not just policy and implementation. It involves stakeholders and society’s involvement, and hence change is not just rhetoric.

### Shanghai

According to Deng and Zhao, Shanghai’s impressive achievement in PISA 2009 can be unpacked by analyzing reforms in the post-Mao era along three natures: selection, justice, and independence. Findings illustrate the interplay of political, economic, and socio-cultural forces that shape its reforms. Shanghai attempts to reduce selection and competitiveness based on exams and give stakeholders more autonomy, but how to realize justice remains the core. In the Chinese context, education reinforces social justice. Social cohesion and selection is intertwined with social equality. Social equality does not mean the same quality education for all, but providing an open opportunity for all to realize upward mobility. These principles shape Shanghai’s education system.

### Taiwan

Lin, Wang, Li, and Chang analyze the development path in Taiwan since 1994 focusing on two reforms, teacher education and curriculum. Taiwan’s journey is moving from centralization to decentralization and now back to

centralization because centralized forces are useful to ensure the quality of reforms. Major lessons learned concern how reforms that work in other countries cannot be adopted without adapting to Taiwan’s context. Reforms need supporting structures and training to achieve desired outcomes. Reforms need to adopt a gradual evolutionary stance with multiple feedbacks and refine loops. Isolated reforms are less effective. Aligned reforms generate push to steer the system forward.

### Hong Kong

Lee and Manzon explore educational equity and quality in Hong Kong. Hong Kong provides an interesting case to the understanding of how it achieves high quality and equity without being affected by students’ social-economic inequality. Possible explanations can be narrowed down to:

Policy with explicit emphasis on equity; and  
 Operational aspects that addresses inter and intra schools’ disparity and diversity.

The authors apply Bourdieu’s logic of practice and argue that systemic education reforms and changes in structure, curriculum, and assessment redefine relations and elitism in the educational field offering objective opportunities that promote educational quality for all. Cultural habitus, such as students’ tough dispositions and parents’ passion for children’s learning, also account for Hong Kong’s achievement of equity and quality. Equity is not a static state. Ongoing efforts are needed to maintain social justice and equitable opportunities.

### Singapore

Driven by a desire to actualize 21st century learning in Singapore, Toh, Jamaludin, Hung, and Chua argue that school leaders play a key role. Ecological leadership leverages and synthesizes structural and socio-cultural connections across all levels of the system to ensure school-based innovations proliferate to innovation diffusions at the system-wide level. The authors postulate that Singapore takes an ecological stance toward leadership development. The proposed model highlights attributes and roles of ecological leaders in innovation diffusion.

Koh, Ponnusamy, Tan, and Lee observe a growth-centered model of governance in a centralized, decentralized Singapore system where initiatives introduced promote flexibility and innovation within schools. The authors describe the case of how one school implemented the Integrated Programme to shed light on the processes involved in curriculum innovation. Findings reveal three significant processes: negotiating the program with the school’s vision; finding common ground for buy-in; and investing in

preparation time. The authors stress that curriculum innovation is a socio-cultural process that cannot be reduced to a factor or individual in a context-free environment. Strong school leadership and teacher professionalism mitigate tensions that emerge in the implementation process. Also, curriculum innovation is a long-drawn process, which requires sustainable practices in Singapore.

### Comparisons Between Countries

Harris, Jones, Adama, Perrera, and Sharma examine structures in Hong Kong and Singapore for leadership development. The value of leadership development programs in both countries stress problem solving and peer collaboration. Relying on capacity building programs is insufficient. Hong Kong and Singapore also work on implementation science to ensure policies are translated and embedded into practice coupled with leadership supports to drive change. These countries work on evidence-based policy implementations with constant refinement and careful coordination with structures, such as leadership programs, to drive implementation. Implementation science coupled with leadership programs tightens alignment between research, policy, and practice.

In the 21st century, teaching and learning need to go beyond content knowledge toward a holistic stance. Lee and Hong analyze two aspects of holistic education, transformative learning and community engagement. They use Finland as an example taking a more decentralized stance and draw implications on the approach Singapore may adopt. They stress that contextual conditions and negotiations between state and society influence whether an organic or guided approach is adopted. These approaches are not mutually exclusive; not one is better than the other. Rather the trajectory is doing the best for education given particular socio-cultural contexts; adapting to the education system's landscape, assumptions, and imperatives.

Globalization and society changes necessitate education systems to consider multicultural curriculum. Multiculturalism in education relates to inclusiveness, concerns with social justice, and how it is embedded in policy, pedagogy, and curriculum. Jackson examines multicultural curriculum in Hong Kong and Taiwan over the last two decades. She stresses that despite similarities as broadly Chinese societies, the disparate approaches and tensions highlight the impact of politics, cultures, and demographics on multicultural education. A nation's self-image underpinned by historical development influences multicultural education. This contextually based piece highlights the dialectics between social intention, the multicultural curriculum, and the ability of education systems to capitalize on policies and resources to embrace inclusiveness, diversity, and social justice.

The four top performing Asian countries (Shanghai, Hong Kong, Korea, and Singapore) in PISA 2009 exhibit high percentages in reading literacy and disadvantaged, academic resilient students. Cheung, Sit, Soh, Leong, and Mak elicit the predictive variables (selected demographic information and reading literacy measures) in disadvantaged, academic resilient students. Findings show that family structure, expected education, kindergarten attendance, and reading literacy measures differentiate between disadvantaged and non-disadvantaged students. Enjoyment of reading activities and metacognitive awareness are two measures that policy makers can change to raise the reading literacy standard of disadvantaged non-resilient students. In this paper, the authors look into each country's findings and draw implications to policy.

### Conclusion

This special issue, with its diversity of perspectives, hopes to generate a productive academic dialog as we recognize that no two systems are identical, and any recommendations to move a system forward must consider local realities with mechanisms and time to sustain reforms. Context and the system are intertwined in ways more deeply nuanced than typically anticipated. Hence, we need to be cautious when we draw implications of ideas from one system to another. A significant shift in any system involves the nurturing of new cultures and changes to permeate across multiple levels. If genuine changes on the ground are not immediately observable, the imposition of structures and processes to enforce changes in behavior that are evident or quantifiable may not lead to sustainable and productive transformation.

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