

Achieving with Integrity

Towards Mindful Educational Change

CJ Koh Professorial Lecture Series No. 6
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Achieving with Integrity: Towards Mindful Educational Change

CJ Koh Professorial Lecture Series No. 6

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FOREWORD BY SERIES EDITOR



IT BRINGS ME great pleasure to present to you the sixth volume of the *CJ Koh Professorial Lecture Series*—“Achieving with Integrity: Towards Mindful Educational Change”. Professor Dennis Shirley was appointed the tenth CJ Koh Professor from 2 to 10 March 2014. This is a consolidated report of the NIE Seminar, Roundtable Discussion and Professorial Public Lecture. The purpose of this report is to ensure that the rich and insightful discussions arising from Prof Shirley’s appointment reach out to key stakeholders within the National Institute of Education (NIE), the Ministry of Education (MOE), and the wider local and global educational fraternity at large.

The CJ Koh professorial appointments have been made possible through a donation of S\$1.5 million to

the Nanyang Technological University Endowment Fund by the late Mr Tiong Tat Ong, executor of the late lawyer Mr Choon Joo Koh (CJ Koh) estate. The endowment serves the programme of the CJ Koh Professorship in Education. An additional sum of S\$500,000 was donated to the endowment fund for the awards of the Pradap Kow (Mrs CJ Koh) Scholarship in Higher Degrees in Education.

In Professor Shirley’s Seminar, entitled “Convergence Pedagogy: The Challenge Ahead”, held in NIE, he gave his astute view of the convergences in visible educational change. He shared about the four zones of convergence and presented the idea of the wave of convergent pedagogy.

FOREWORD BY SERIES EDITOR

The Roundtable Discussion, titled “Helping Every Learner Succeed: Perspectives from research in Professional Learning Communities and the Learning Sciences”, was a closed-door session where two research groups in NIE presented their working papers namely, “Helping Every Learner Succeed: Perspectives from the Learning Sciences” and “Teachers as Learners in Professional Learning Communities”. A fruitful discussion ensued between the panellists and participants on the topic of improving the quality of teaching and learnings that every learner can succeed.

In the Public Lecture by Professor Shirley, entitled “Mindful Educational Change: The Quest for Achievement and Integrity”, he presented seven synergies of mindful teaching that can help teachers deal with the pressures they face daily in their professional lives and how mindful teaching can be scaled from a classroom level to a system level.

I would like to take this opportunity to thank all who contributed to this report in one way or other. To our immediate past NIE Director Professor Sing Kong Lee (who stepped down on 30 June 2014) and Dean of Education Research Professor Wing On Lee, we are grateful thank you for your continued support of the *CJ Koh Professorial Lecture Series*. To our CJ Koh Professor Dennis Shirley, for your valuable insights in your time with us. To our knowledgeable presenters (in alphabetical order), Ms Helen Hong, Dr Mingfong Jan, Dr Daphnee Lee, Dr Wan Ying Tay and Dr Lung-Hsiang Wong, my sincere appreciation goes out to all of you who carved out precious time to contribute to the richness of discussions at the roundtable discussion and for writing up your presentations.

This consolidated roundtable report would not have been possible without the excellent secretariat team which supported the writing from the first drafts to the

final product you see today (in alphabetical order), Mr Chenri Hui, Ms Jane Huiling Lin and Ms Siti Suhana Bte Roslan; and also to our colleague from the Office of Education Research (Knowledge Management and Communications Unit) Mr Jarrod Tam for his copyediting and close proofreading work. On that note, we proudly present to you the sixth issue of the *CJ Koh Professorial Lecture Series*—“Achieving with Integrity: Towards Mindful Educational Change”.

Associate Professor Ee Ling Low
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August 2014
Singapore

PROLOGUE

PROFESSOR OON SENG TAN



THE IMPACT THE CJ Koh Professorship creates is an important one. For many years, it has brought an excellent array of prominent scholars from around the world to the shores of Singapore. Our colleagues from NIE, the Ministry of Education and schools benefit from the wisdom and knowledge of these scholars, as much as these scholars have inevitably learned from interacting with us and observing how our education system works. This continuous dialogue and collaboration is essential in the present age where it is not only the responsibility of an individual teacher, school or parent to ensure our children get the best education possible but it is also the responsibility of every citizen living in our global workplace and society who believes in the power of education to create a better future for us all.

Dialogues facilitated during the week-long appointments of the CJ Koh professors help us widen our knowledge and our perspectives, giving invaluable comparative insights about our education systems and how to scale new peaks of excellence. In a time where the world is bombarded with digital information through the Internet, hit with the commercialisation of globalisation, and where tremendous cross-cultural comparison are possible, we must be cognisant of how we need to prepare our learners to not just be ready for the future but with the possibility of even being able to invent the future.

More than ever, we need to be mindful of the need to instil the importance of integrity in our learners. We have to take the responsibility to provide our

PROLOGUE

PROFESSOR OON SENG TAN

learners with a good moral compass so that they may grow into responsible citizens. We need to ensure that we can manage the waves of change and make the world a better place. Avenues provided as part of the CJ Koh Professorship allow us platforms to deliberate about pertinent issues affecting all of us in the fraternity of education while publications, like this *CJ Koh Professorial Lecture Series*, give us the chance to document and share the wealth of knowledge that has been provided through our many dialogues and conversations that have taken place with the appointment of each CJ Koh Professor.

I would like to extend special thanks to Professor Dennis Shirley for coming to Singapore to share his expertise, experiences and insights. I am sure that the engagement with Singapore educators, researchers and policymakers has broadened our educational horizons and given us new ideas for bringing about educational change. It leaves me to congratulate the editors of this issue of the *CJ Koh Professorial Lecture Series*, entitled “Achieving with Integrity: Towards Mindful Educational Change” for doing a thorough and careful job of documenting our collective learnings.

Professor Oon Seng Tan
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September 2014
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ABOUT THE CJ KOH PROFESSOR DENNIS SHIRLEY



PROFESSOR DENNIS SHIRLEY is Professor of Education at the Lynch School of Education at Boston College. His work in education spans from the micro-level of assisting beginning teachers in complex school environments, to the macro-level of designing and guiding large-scale research and intervention projects for school districts, states and provinces, and nations. He was the first US scholar to document the rise of community organising as an educational change strategy, and his activities in this arena have led to multiple long-term collaborations in many countries.

For 6 years, Professor Shirley led a teacher inquiry project in Boston that has been published in *The Mindful Teacher* (co-written with teacher leader Elizabeth MacDonald and published by Teachers College Press in 2009). He has written on mindfulness and technology in K–12 education both in the US and abroad. These two areas of interest, as well as many conversations with teachers, principals, and educators, have resulted in the creation of www.mindfulteacher.com, a website that acts as a place to present research, resources and a place for discourse on mindfulness in education.

The Mindful Teacher website is designed to provide a virtual community of inquiry and practice for all educators who are seeking more mindful and humanistic schools and systems. This website is organised into three sections, “Practice”, “Learn” and “Connect”, designed to help educators with the resources to deal with ins and outs of school life, access to new education research, and a new space for educators from any part of the world explore challenges and opportunities with one another, respectively.

In addition to his work on *The Mindful Teacher*, Professor Shirley and his colleague Professor Andy Hargreaves, who was the sixth CJ Koh Professor, are working on a grant with Education Northwest to improve rural schools in Washington, Oregon, Alaska, Idaho and Montana. Previously, he served on a team for the Organisation for Economic Cooperation and Development (OECD) studying the improvements to lower secondary education in Norway. The findings of much of his international research are presented in two co-authored books with Professor Hargreaves, entitled *The Fourth Way: The Inspiring Future for Educational Change* (published by SAGE Publications in 2009) and *The Global Fourth Way: The Quest for Educational Excellence* (published by SAGE Publications in 2012).

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They have also conducted a study of over 300 secondary schools in the United Kingdom affiliated with the Raising Achievement Transforming Learning network of the Specialist Schools and Academies Trust. In addition, Shirley and Hargreaves completed a study of the Alberta Initiative for School Improvement, a network sponsoring lateral learning within and across schools in the world's second highest-achieving jurisdiction after Finland.

In August 2013, Professor Shirley began serving as Editor-in-Chief of *The Journal of Educational Change*. He is Chair of the Special Interest Group (SIG) on Educational Change of the American Educational Research Association. He publishes frequently in *Educational Leadership*, *Phi Delta Kappan*, *Teachers College Record*, and *Education Week*. Fluent in German, he spoke at and advised the Free University of Berlin, the University of Vienna, the University of Hildesheim, and the University of Dortmund on topics ranging from community engagement in schools to the reform of teacher education.

Professor Shirley has presented his research and led professional development workshops in Australia, Austria, Belgium, Brazil, Canada, Chile, Ireland, Germany, Mexico, Norway, Singapore, Spain, Sweden, Switzerland, South Africa, and the United Kingdom. He is planning future engagements in Australia, Canada, Chile, Germany, Malaysia, Norway, Singapore, and Sweden, as well as several cities in the United States. He has a steady stream of speaking engagements and visiting professorships in the United States, Canada, Ireland, Germany, Austria, Spain, Italy, the United Kingdom, and Japan.

Professor Shirley has received numerous scholarly awards, including fellowships from the Alexander von Humboldt Foundation in Bad Godesberg, Germany,

and the Rockefeller Foundation in Bellagio Center, Italy. He holds a doctoral degree from the Harvard Graduate School of Education.

CONVERGENCE PEDAGOGY: THE CHALLENGE AHEAD

PROFESSOR DENNIS SHIRLEY
5 MARCH 2014, SEMINAR, NIE, SINGAPORE



Introduction

AT THE CJ Koh Seminar held at NIE on 5 March 2014, Professor Dennis Shirley shared the phenomena of convergence that is happening in the world and explored the concept of convergence in educational change today.

An Inflection Point

In the context of education, Professor Shirley described an inflection point as a turning point where significant change can occur if educators around the world work together despite the diversity in societies. Through observations from his research experiences and collaborations with international education organisations, he sees that educators are already working together and learning from one another to improve teaching and learning globally.

Professor Shirley also noted the change in another context, that is, the human condition. Statistics from the *Millennium Development Goals 2013 Report*¹ showed that there are indeed improvements to the human conditions in the following aspects:

- eradicating extreme poverty and hunger;
- achieving universal primary education;
- promoting gender equality and empowering women;
- reducing child mortality;
- improving maternal health;
- combating HIV/AIDS, malaria and other diseases;
- ensuring environmental sustainability; and
- developing global partnership for development.

¹ *Millennium Development Goals* was established following the Millennium Summit of the United Nations in 2000.

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Professor Shirley believes these improvements and changes are happening as a result of convergence in the different sectors of humanity. He presented his next point on the phenomena of convergence through four zones of convergence.

Four Zones of Convergence

Convergence in improving human conditions

The first zone of convergence that was addressed is the convergence in improving human conditions, which is, moving from poverty towards prosperity. Professor Shirley described this zone through his review of a book entitled *Getting Better: Why Global Development Is Succeeding and How We Can Improve the World Even More* by Charles Kenny (2012). In the book, Kenny highlights five key areas of improvements and Professor Shirley identified these improvements as a result of convergence out of extreme poverty. The key areas and the improvements are:

1. Global health – An increase in the average life expectancy on earth from 30 years to 70 years.
2. Education – An increase in the number of literate people from 25% in 1870s to 80% today.
3. Political and civil rights – More opportunities are given to people to participate in their nation's governance, especially through democracy.
4. Decline of violence – A large decline in the number of wars, rebellions and general violence around the world.
5. Gender equity – The improvements in terms of access to education for girls and women have led to an increasing improvement in literacy. An experiment involving 15-year-old girls showed that they are generally reading 2 years ahead of boys.

Convergence between the East and West

The second zone of convergence that was discussed was influenced by a book entitled *The Great Convergence: Asia, the West and the Logic of One*

World written by Kishore Mahbubani (2013). This book describes a convergence between the East and the West. One example that illustrates this zone of convergence is the increasing number of Asian students in US schools who are bringing in different perspectives, raising different sets of questions, and infusing different historical traditions and cultures. Professor Shirley shared two highlights from the book.

The first highlight is the introduction of five new norms which are Science, Logic, Free Markets, Social Contract and Multi-lateralism. With Science, we need to look for evidence to support arguments. With evidence comes Logic, the understanding behind what the evidence is showing. Hence, we can no longer refer to “magical” phenomena or traditional thought behind something that has happened. This disjoint from the traditional can also be seen in the increasing move towards free markets and open trade opportunities which allow for globalisation and cross-cultural contacts. This, in turn, will lead to the development of social contact between governing parties and the people in society.

The second highlight in the book is the four pillars of convergence and they are as follows:

1. Environmental convergence – A mutual understanding on the effect of nuclear fallout, such as the nuclear disasters in Japan and Chernobyl.
2. Economic convergence – A mutual agreement on moving away from world conflict that could lead to economic disaster, such as the current conflict between Russia and Ukraine.
3. Technological convergence – Rapid sharing of information with one another in a global framework.
4. Aspirational convergence – A mutual desire to live a longer and happier life, to be highly educated and to learn at higher levels, and to move from poverty to prosperity.

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Professor Shirley agreed with Mahbubani on two arguments. Firstly, more needs to be done in the convergence between East and West. Secondly, the education sector is still found to be lacking behind in its progress as compared to free markets, in terms of development in science and trade in cultural exchange.

Convergence in technology

The third zone of convergence is technological convergence and Professor Shirley referred to a book entitled *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, written by Erik Brynjolfsson and Andrew McAfee (2014). According to the authors, technological change is happening at an exponential rate. The rate at which the use of technology has changed is by far different than the changes that have taken place in sectors like education, health and leisure. Technologies are getting smarter, more customised and more adaptive, making it easier for people to use technology for communicating and learning from one another from all over the world.

With the enhancement of technology, however, there are additional dimensions that we should be aware of that might contribute to social peace and cohesion. One dimension that Professor Shirley mentioned is the way of surveillance, where we can make sure what has happened is captured, thereby giving a greater accountability of one person to another.

Professor Shirley concluded the discussion on the third convergence with another book written by Annalee Saxenian (2006) called *The New Argonauts: Regional Advantage in a Global Economy*. In the book, the author argues that a lot of convergence is happening because new technological elites were travelling back and forth all the time around the world, exchanging information, knowledge and building partnerships with one another.

Convergence in education

The fourth and final zone of convergence that Professor Shirley brought into the discussion is educational convergence. He related this convergence with a book edited by Zongyi Deng, S. Gopinathan and Christine Lee (2014) called *Globalization and the Singapore Curriculum: From Policy to Classroom*. Professor Shirley highlighted seven convergences that he came across in the book. They are:

1. economic reform discourses,
2. formation of competent citizens,
3. policy borrowing,
4. national values and traditions,
5. programmatic curriculum making,
6. decentralisation, flexibility and choice, and
7. school-based curriculum development.

Apart from these convergences, the editors and their authors also mention that there are divergences that people should be aware of. The first divergence cited is “Centrality of Academic Content” which refers to having a strong integrity of the discipline, anchoring a discipline with knowledge and improving understanding from a novice level to an expert level. The second divergence is a school-based curriculum enactment called “Decentralised Centralism” where schools are allowed to develop their own curriculum at their own discretion so long as the students are learning.

With all the zones of convergences that are happening around the world, the next objective is finding the link between convergences and, what Professor Shirley and Professor Andy Hargreaves (2009) term, the fourth way of change in their book entitled *The Fourth Way: The Inspiring Future for Educational Change*.

A Fourth Way Menu of Change Strategies

Professor Shirley described the changes in the educational landscape through the four ways of change

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(see Table 1). In summary, he mentioned that the first way of change has largely disappeared in the education systems around the world but may still be practised in some private schools. The second way of change is happening in countries like Chile where there is government involvement in the education system, competitiveness is encouraged between schools, and choices are given to parents. The third way of change involves policymakers, and competitive measurable standards are in place but educators are not driven quite as hard. Parents are given choices but are now supplemented with community service, and educators are learning and supporting each other from across schools.

Lastly, the fourth way of change is where schools become places that inspire, innovate and have an

inclusive mission. Professor Shirley quoted Singapore as an example where fourth way features are already present as shown in initiatives such as *Teach Less, Learn More*. The fourth way of change also includes public engagement, community developments and has sustainable partnership with the civil society. With the fourth way making its presence in education systems in this point in time, educators can expect to face challenges in the future, anticipate the direction where education is converging towards, and whether convergent pedagogies can really be created.

A convergent pedagogy and the challenge ahead

Professor Shirley shared his initial thoughts on how educators may want to begin when conceptualising a convergent pedagogy. He suggested looking at

Table 1. The four ways of change (adapted with permission from Professor Shirley).

		The First Way	The Second Way	The Third Way	The Fourth Way
Pillars of Purpose and Partnership	Purpose	Innovative, but inconsistent	Markets of standardisation	Competitive measurable standards	Inspiring, innovative and inclusive mission
	Community	Little or no engagement	Parent choice	Parent choice and community service delivery; entrepreneurial and expedient	Public engagement and community development; transparent and responsible
	Investment	State-funded	Austerity and markets	Renewal	Sustainable
	Corporate Influence	Minimal	Extensive	Partnerships with government	Partnerships with civil society
	Students	Happenstance involvement	Recipients	Targets of teaching and service delivery	Engagement and voice
	Learning	Eclectic and uneven	Direct instruction to standards and test requirements	Customised learning	Mindful learning and teaching
Principles of Professionalism	Teachers	Variable training quality	Command and control	Peer-driven for mandated results	Peer-driven for professionally chosen targets
	Associations	Autonomous	Deprofessionalised	Reprofessionalised	Agents of change
	Learning Communities	Discretionary	Contrived collegiality	Data-driven and professionally effervescent	Evidence-informed
Catalysts of Coherence	Leadership	Licentious	Line management	Networked	Systemic and sustainable
	Networks	Voluntary	Competitive	Dispersed	Cosmopolitan
	Responsibility	Local and sampled	High-stakes targets and testing by census	Escalating targets, self-surveillance and testing by census	Responsibility first, by sample, ambitious and shared targets
	Differentiation and Diversity	Underdeveloped	Mandated and standardised	Narrowed achievement gaps and data-drive interventions	Demanding and responsive teaching

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convergence both as a problem and as a potential. Convergence can be a problem if it is perceived as another wave of neo-colonialism,² a sinicisation³ of Western education and occidentalisation⁴ of the East. On the other hand, it can be seen as potential through pragmatism, cosmopolitanism, humanism, environmentalism and diversity. The implication of convergence in education could lead to the formation of a convergent pedagogy, convergent curricular, convergent assessment and convergent technology. Professor Shirley reminded us that we need to be mindful of the divergence that may appear with the convergence. These divergences that we may encounter are our national and cultural heritages, our linguistic diversity and our diversity that can be upheld as a value. We might also encounter a hybrid which comprise different combinations of convergences and divergences.

Conclusion

Professor Shirley concluded his presentation with a reminder that if we have indeed reached an inflection point, we have to think about new ways to help the younger generation enjoy their learning journey, we have to be aware of events occurring around the world and we have to be mindful of the problems that are being developed intentionally by people. He encouraged us to think about our current standing as we are being thrown together in space and time and to remember that at the end of the day, it is the children who matter as they look up to the educators for inspirations, guidance, moral support and role models.

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² Neocolonialism refers to the policy of a strong nation in seeking political and economic hegemony over an independent nation.

³ Sinicisation refers to the process of bringing an entity (e.g., the Western education) under Chinese influence.

⁴ Occidentalisation means Westernisation.

ROUNDTABLE DISCUSSION

5 MARCH 2014, NIE, SINGAPORE

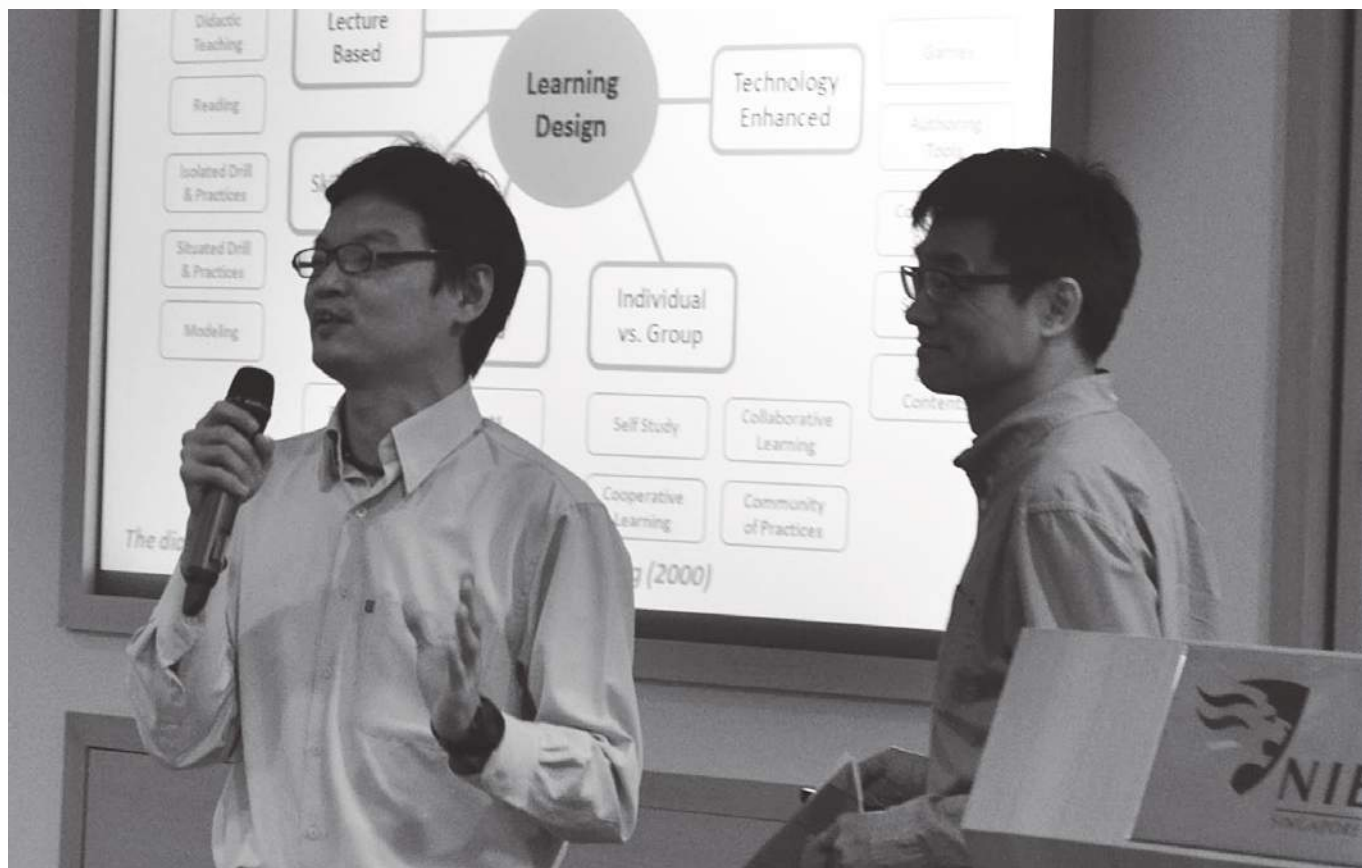


This Roundtable Discussion gathered prominent education academics and thinkers to share their thoughts and perspectives of how their education systems level up their citizens and sustain their educational achievements from within. This honest, candid and forthright sharing session sought to elucidate the workings of successful education systems, their successes and challenges for the future.

HELPING EVERY LEARNER SUCCEED

PERSPECTIVES FROM THE LEARNING SCIENCES

LUNG HSIANG WONG AND MINGFONG JAN



Introduction

HOW CAN WE help every learner succeed? When asking this question, many people may take it for granted that “every learner” refers mostly to those who underperform in the current education system. This is not the case. In the 21st century, the era of the Big Shift, even high-achieving students identified by our education systems may not be successful when they leave schools.

The big Shift Era and the S-curve Era

Professor John Seely Brown, the ninth CJ Koh Professor, succinctly articulated the relationship between the Big Shift Era and the S-curve Era in order to make a case for 21st century learning. The S-curve Era refers to the period between the 18th

and 20th centuries. In this period, societies and cultures developed stably. Episodes of technological innovations changed the world, but usually there were 50–70 years of stability following the innovation. Therefore, most people developed a skill set in order to have a successful career.

The 21st century, however, is the beginning of the “Big Shift Era”. It is characterised by exponential change and emergency socially, culturally and technologically. New skills and practices emerged at an unprecedented speed, resulting in rapid changes in knowledge, society and culture. A skill set that enables one to make a living in the past becomes outdated in just a few years. Take *Google* and *Facebook* for example, the two companies emerged as technological giants transforming how we

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searched the net for information and socialised in just one decade. They also changed how we learn, what we learn, where we learn and with whom we learn. In this process, many professions have disappeared with the emergence of new demands. In the “Big Shift Era”, learning to read and write well is no longer sufficient when the world now demands the skills to learn continuously in order to recreate one self.

The Story of Emily

Emily has been performing very well in school. She was admitted to one of the best secondary schools in Singapore based on her PSLE results. Though she is a digital native and a frequent user of social media, she spends a great portion of her time mastering academic subjects and participating co-curricular activities. Her future goal is to work in an innovative company like *Google* or *Facebook*. The question, however, is whether she is on the right track to have the 21st century skills that these companies demand. Will schools provide the education that will be essential for the presently unforeseeable Big Shift Era? Luckily, there is a reference point for her. Thomas Friedman, who authored *The World is Flat* (2005), published an article entitled “How to get a job at *Google*” (2014) in the *New York Times*.

Admitting that “good grades certainly don’t hurt” (2014) to get a job, Lazlo Bock, who is the *Google* Vice President of People Operations for *Google*, commented that “Grade Point Averages are worthless as a criteria for hiring, and test scores are worthless... We found that they don’t predict anything.” Instead, *Google* is hiring people with assessment tools that differ significantly from those used to assess Emily in traditional education. *Google* tests one’s ability to learn and process information on the go. They want to know if a future employee will be a good team player and be able to play different roles in diverse problem-solving situations. The tools evaluate candidates’ sense of ownership and humility because these are

critical characteristics that propel one to keep raising questions and to keep on learning.

In sharing the story of Emily, we are not recommending that schools should be designed merely for students to get hired by innovative companies like *Google*. *Google* is the symbol for forward-looking change, innovation, “the Big Shift” and the unpredictable nature of the 21st century society. We intend to problematise the constructs of “high-achieving students” and “success”, which are framed with a 20th century mindset. Most importantly, we wish to bring out a challenge that the field of the learning sciences aims to tackle—rethinking and redesigning how people learn. The mainstream school system, as a learning system designed for the S-curve Era, requires a reconceptualisation and redesign at the systemic level for the Big Shift Era.

How People Learn: Perspectives on Learning from Three Paradigms

Three major perspectives on learning are built into educators’ mindset and the design of school systems: behaviourism, cognitivism, and social constructivism. Learning, viewed from the behaviourism perspective is unpacked into overt and measurable behaviours which are then considered the results of learning. Although unpacking the processes of thinking is vitally important for learning, it is not the strength of the behaviourism perspective. Cognitivism aims at unpacking thinking processes. It considers mental processes such as memory, misconception, prior knowledge. With the advancement in cognitivism, we are in a much better position to design learning mechanisms that are in coherence with the mental processes.

Unpacking the mental processes, or the mind, however, is insufficient when we seek to redesign learning processes that take place in schools. The mind is situated in and cannot be separated from cultures and societies within which we live. Social constructivism

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studies minds in the context of cultures and societies. It considers the meaning-making processes such as agency, identity, social relationship, social infrastructure and culture. With the social constructivism lens, we are in a better position to design learning activities, put in place the social infrastructure and even envision the culture for the schools of the future.

To help readers better comprehend the differences among the three learning paradigms and associating them with respective relevant sets of teaching learning practices, a general framework is presented (see Figure 1). Within the framework, five prevailing learning objectives are identified, with five non-dichotomous categories of teaching and learning practices, namely, lecture-based, skill-based, inquiry-based, individual versus group-based, and technology-enhanced approaches.

Behaviourists typically strive to focus content mastery, through didactic teaching, listening, reading, isolated drill-and-practice and self-studying, perhaps supported by various technological tools such as digital contents, simulators and drill-and-practice style or educational games. Within this paradigm, lecture-based and skill-based strategies are widely seen as the most efficient means to achieve the learning objectives.

In contrast, cognitivists identify higher-order thinking skills as an equally important learning objective along with content mastery. Greater emphasis is therefore placed on more open-ended learning approaches such as situated drill-and-practice, modelling, problems, cases, projects, learning by design, cooperation, collaboration, and learning with the aid of ICT tools such as communication tools, simulators and digital contents. Two other relevant strategies

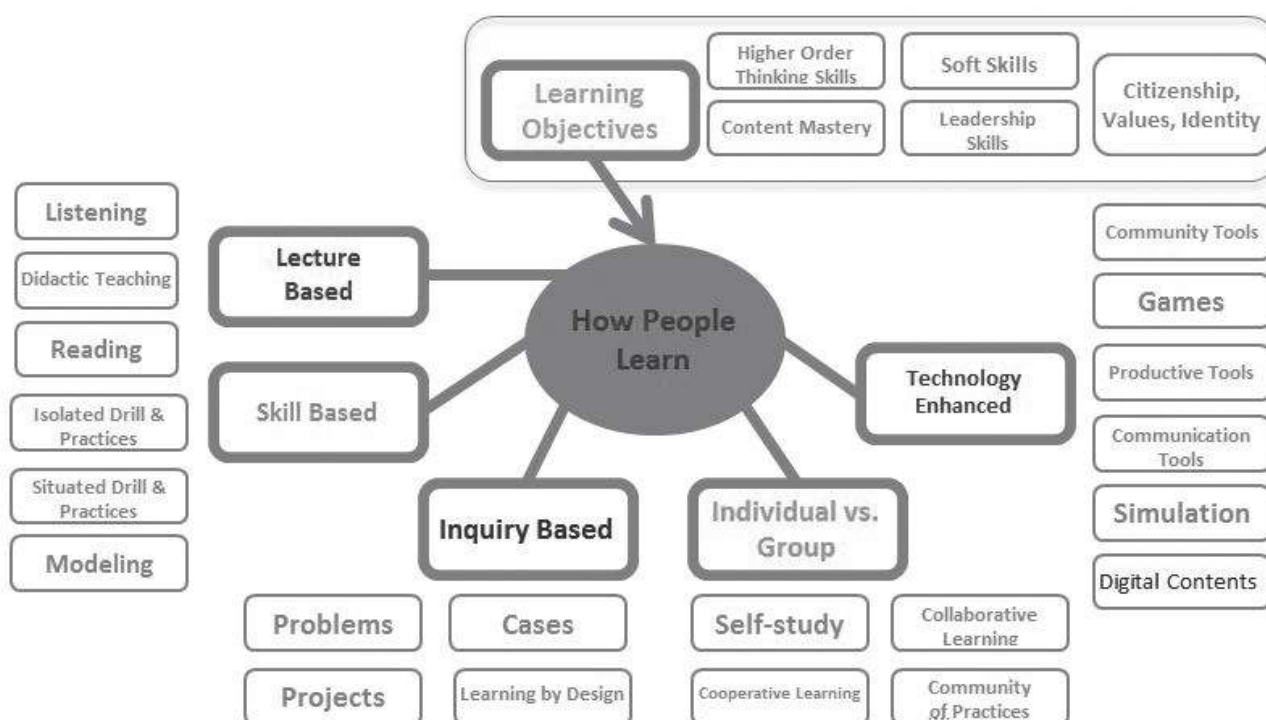


Figure 1. How people learn and major learning approaches. Adapted from Bransford, Brown, & Cocking (2000).

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are reading and self-studying, albeit their importance is downplayed.

Socio-constructivists, on the other hand, see higher-order thinking skills, soft skills, leadership skills, and citizenship, values and identity as the salient objectives for learning. They believe in empowering the students to learn autonomously (i.e., self-directed learning) and within the community (i.e., collaborative learning). Learning strategies that socio-constructivists foreground encompass the full set of cognitivist learning strategies as stated above, with additional learner-empowering approaches such as community of practices, community tools, epistemic games and productive tools.

Redesigning Schools for the Future

Looking at the status quo in the mainstream schooling system (not specifically referring to schools of any country), the typical focus is content mastery with teaching and learning strategies that dominate school practices, such as didactic teaching, reading, drill-and-practice, self-study, cooperative learning, and the use of community tools, communication tools, simulators and digital contents. It is observed that such practices overlap heavily with typical behaviourist strategies.

Schools in many parts of the world have been putting in additional efforts to develop their own niche areas in (e.g., inquiry-based learning, collaborative or situated drill-and-practice) to address the needs of nurturing higher-order thinking skills or citizenship, values and identity. Such initiatives are nevertheless rarely integrated into the formal curricula and neither impacts the system nor informs the respective government authorities on how to incorporate these 21st century dispositions and practices into the national policies. We need more of these schools a systematic level.

How Can the Learning Sciences Help Design Future Learning

The 21st century challenge raises questions about how we learn, what we learn, where we learn and, more fundamentally, why we learn. These questions, when examined with different learning perspectives, call for different answers and solutions. The learning sciences field (Sawyer, 2006) emerged in the 1990s, at a time when constructivism and socio-constructivism began to challenge the mainstream learning perspectives that were informed by cognitivism and behaviourism. It is an emerging research paradigm informed mainly by cognitive science and sociocultural learning theories (e.g., community of practices). It seeks to study not only what is in the head, but also where the head is situated, by unpacking the cognitive and sociocultural aspects of learning. With an interventionist approach, learning scientists design artefacts, activities, learning environments and even social infrastructure in order to foster learning. In a nutshell, it redefines learning and research on and about learning.

Conclusion

Over the past few decades, the learning sciences field has exhibited increasing diversity in the study and development of the aspects and approaches of learning. What still holds is its fundamental concern and motivation: not only to advance the learning theories, to generate learning design frameworks and to experiment with innovations in schools, but also to make use of the outcomes of all these efforts to impact practice and inform policymaking. This does not mean that learning scientists are advocating a total abandonment of the research paradigms that shape today's educational settings. Instead, learning science scholars are keen to study the interplay between the (individual) cognitive and socio-cultural levels of the learning environments, perhaps with behaviourism as

HELPING EVERY LEARNER SUCCEED

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complementary strategies to strengthen certain stages or aspects of learning.

Celebrating and even leveraging on learners' individual differences to advance learning at both individual and community levels become one of the salient dispositions of scholars in the field. In turn, the learning scientists have been questioning the prevailing practice (in most countries all over the world) of banding students into various streams based on their performances in standard assessments (where it is the behaviourist learning objectives are predominantly tested).

For example, the introduction of a cognitivism- and/or socio-constructivism-informed intervention into a class with students being originally banded into high-, medium- and low-achievement streams ("HA-vs-MA-vs-LA") may result in the banding being reshuffled. More ideal outcomes as seen in the learning scientists' eyes is to make the whole class become "HA-HA-HA" rather than insisting on banding (such as bell-curve distributions of student results as many of the tertiary institutions are practising) even if everybody improves and reaches the same level of sophistication in learning. A potentially more conducive scenario is "HA1+HA2+HA3" where every learner excels in his/her own niche areas (higher-order thinking + identity + values) and where all these learners are capable of working together as a team (soft skills + leadership skills) and can effectively contribute their own strengths to resolving common problems and achieving common goals that confront us all in the 21st century world.

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TEACHERS AS LEARNERS IN PROFESSIONAL LEARNING COMMUNITIES

THE PROBLEMATISATION OF HOW TEACHERS CAN HELP LOW-PROGRESS LEARNERS THROUGH COLLABORATIVE TEACHER PROFESSIONAL DEVELOPMENT

DAPHNEE HUI LIN LEE, WAN YING TAY AND HELEN HONG



Teacher-led Culture of Professional Excellence for Student Learning

TEACHERS MAY be anxious about possible compromises to their professional status if they were to ask for help from their colleagues. However, at the accelerated pace of change which the global educational landscape is currently experiencing, collaborative learning and support networks have become a necessity, both emotionally and culturally, for teaching professionals.

The Professional Learning Community (PLC) underlies a teacher-led culture where teachers collaborate and learn from and with one another by working through authentic problems they face in classrooms. In support of this endeavour, the Academy of Singapore Teachers

introduced PLCs to Singapore Schools. A DuFour PLC model (Lee & Lee, 2013; Ministry of Education, 2010) guides teachers through three key facets: ensuring students learn, building a culture of collaboration, and focusing on student outcomes.

Problematization of “Helping Every Learner Succeed”

When teachers are collaborative artisans of practice, these practitioners are empowered to become the agents that will shape assumptions about student learning. In other words, teachers will become the key to the heart of education, which is to improve student learning. When teachers are able to overcome these insecurities and develop a supportive culture through PLCs, helping each other

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in professional development will naturally extend helping students learn better.

However, the definitions of “good learner” and “good learning” remain contentious and open to interpretation. Teachers are also confronted with the same issues when it comes to helping students become better learners. The theme of this roundtable, “Helping Every Learner Succeed”, is employed to problematise what it means to “help low progress learners” and provide a re-examination of our findings within the context of ensuring student learning and outcomes of PLCs.

In most of the PLCs observed in our study, teachers are conscious of the divide between the “higher ability” and “lower ability” students, and are committed to narrowing the gap between the two. Teachers demonstrated that they want to play more than the traditional custodial roles of just managing classrooms, and learn more about being attentive to all the needs of diverse learners, especially those who are experiencing low progress in their academic work. They want to make sure these students can be uplifted in their academic progress to eventually pass the increasingly demanding academic standards as we work within a knowledge-based paradigm. They made the best use of PLC time to enact changes to this systemic issue within their classrooms.

For example, during a regular PLC meeting, teachers were sharing about their observations of how higher progress students tend to dominate lower progress students during group learning activities, which resulted in students who were already experiencing low progress in academic work to further retreat into silence. As higher progress students assumed leadership to assign roles and give instructions to the rest of the team members, the rest obliged to their role assigned, even for the unpopular ones, and quietly received instruction on the direction of team activities.

Students on the receiving end were, as described by a teacher, “in their own world”. We were, however, gratified to observe these teachers stepping in to say, “Can we do something about this?” The teachers then shared about how other teachers have stepped in to level the playing field by reminding higher progress students to take turns, and stepping forward to offer additional support to lower progress students by asking, “How can I help you?”

Still, in other conversations, teachers talked about “stretching” higher ability students, to challenge them, get them interested in subjects and also guiding lower ability students to pass the examinations. While these strategies work in customising teaching to the differentiated learning needs of the students, and students do become more engaged and effective in learning, their effects may produce the unintended consequence of further deepening the ability divide.

By questioning what it means to help every learner succeed, be it teacher learners, or student learners, we would like to find a way forward as to how teacher learning can be customised so that teachers possess the capacity to review and reflect about the professional issues they encounter in the classroom. In this, we hope teachers find solutions to authentic issues from within their values and belief systems, and are, at the same time, fully aware of the unintended consequence of further widening the ability divide.

This question would need to be addressed before teachers are ready to have the empowerment of full autonomy in leading and strengthening the teaching profession. Our research points to the need for further capacity building in rigorous reflective dialogues among teachers. The insight is derived from the analysis of survey data gathered from teacher self-reports about their PLC engagement in the learning teams.

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Teachers reported much less confidence in engaging in reflective dialogues over emergent issues that were unanticipated by the initiative. In contrast, when it comes to planned strategies that have been very well established as to what teachers are supposed to do in PLCs by the DuFour model (i.e., collaborative learning, ensuring students learn and focusing on student outcomes) (Lee & Lee, 2013; Ministry of Education, 2010), teachers are generally much more confident in enacting professional learning expectations with expedience and effectiveness.

The same patterns were replicated in the ethnographic observations. With regard to reflective dialogue on the issue of low-progress learners, teachers appeared less stringent in monitoring the assumptions they hold toward low-progress student learning and the outcomes they hope to achieve in their teaching. When examining alternative paradigms to learning, they were also less rigorous in putting to question the taken-for-granted assumptions held about low-progress learners, perhaps resulting in the prevalent (mis)assumptions about low-progress learners needing more guidance, more support and less stretching, for instance.

We observed that teachers still believe that guiding these learners and supporting them is the best way to help, even when research increasingly suggest these students learn better if they are enthused into learning the subject. Where changed beliefs had occurred, they remained isolated individual cases, who restricted the pockets of change efforts to the individual classrooms. For example, in an interview, a teacher said, “I teach the lower ability students. But from this project, what I’ve learned is that the interest of students is very important. So I bring this back to my own classroom with the lower ability students to arouse their interest in Science.”

The resolve to enact changes, however, is restricted to the classrooms this teacher have direct influence

over. This teacher’s account resonates with the gap in organised action to enthuse low-progress learners to be motivated by the intrinsic gratification from learning. Other teachers continued to believe that low-progress learners need to be helped to understand how to do the mechanistic task, such as answering multiple choice questions, so that these students are able to at least pass the examinations.

Pertaining to the issue of changing pedagogical paradigms to enhance learning among low-progress learners, teachers have yet to reflect deeply as to how to best help low-progress learners beyond the paradigms that are already prevalent within the Singapore education landscape. In other words, there is poor precedence for organised follow-through in pushing for whole school or between school reforms with regard to the issue of bridging the academic achievement gap of low-progress learners in Singapore schools.

The Way Ahead?

Based on the insights gathered from the evidence base, we found ourselves with more questions than answers. Should we be tackling the assumptions about learning with an alternative paradigm? When it comes to teacher professional development, rather than being “given a fish”, should teachers be prepared for empowerment by being given opportunities to learn “how to fish”? Does the current paradigm provide conditions for such teacher empowerment? Is it time to bid farewell to the precedent culture of being given the fish and welcoming the new, desired paradigm where teachers know how to fish and when best to fish?

Paradigm shifts ought to aim for reform, rather than revolution. It is especially so if you have a precedent culture where positive results have been shown and signs of a high-performing system are evident. The

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challenge resides not just at the policy level, but also at the teacher level. Teacher empowerment does not equate to allowing them to do whatever they want. Without coherent goals, a revolutionary paradigm shift may result in teachers enacting superficial changes, or further retreating into their comfort zone of familiar dispositions.

We are, thus, of the view that in reforming learning paradigms, interim measures, such as having teachers engage in group mentoring to encourage reflective dialogues and familiarity with pushing for reform, may be included to provide a less invasive approach to acquiring dispositions that departs from the technicist paradigm and moves toward the ultimate aim of teacher-led professionalism.

Often, teachers are overlooked in the pedagogical equation of how student learning can be better enhanced. In the hurry to see student outcomes, the rush frequently results in spending time on the professional empowerment of teachers. CJ Koh Professor Dennis Shirley once shared a personal note urging help to be extended to teachers, so they can be empowered to help the students. To do this, it is important and necessary for policymakers, school leaders, educators and teachers to work closely together to actualise the goal of helping every learner succeed. Teachers are lifelong learners who, when empowered to collaboratively reflect and improve their repertoire of pedagogies and professional capacity, can bring the most impactful outcomes in student learning, including for low-progress learners.

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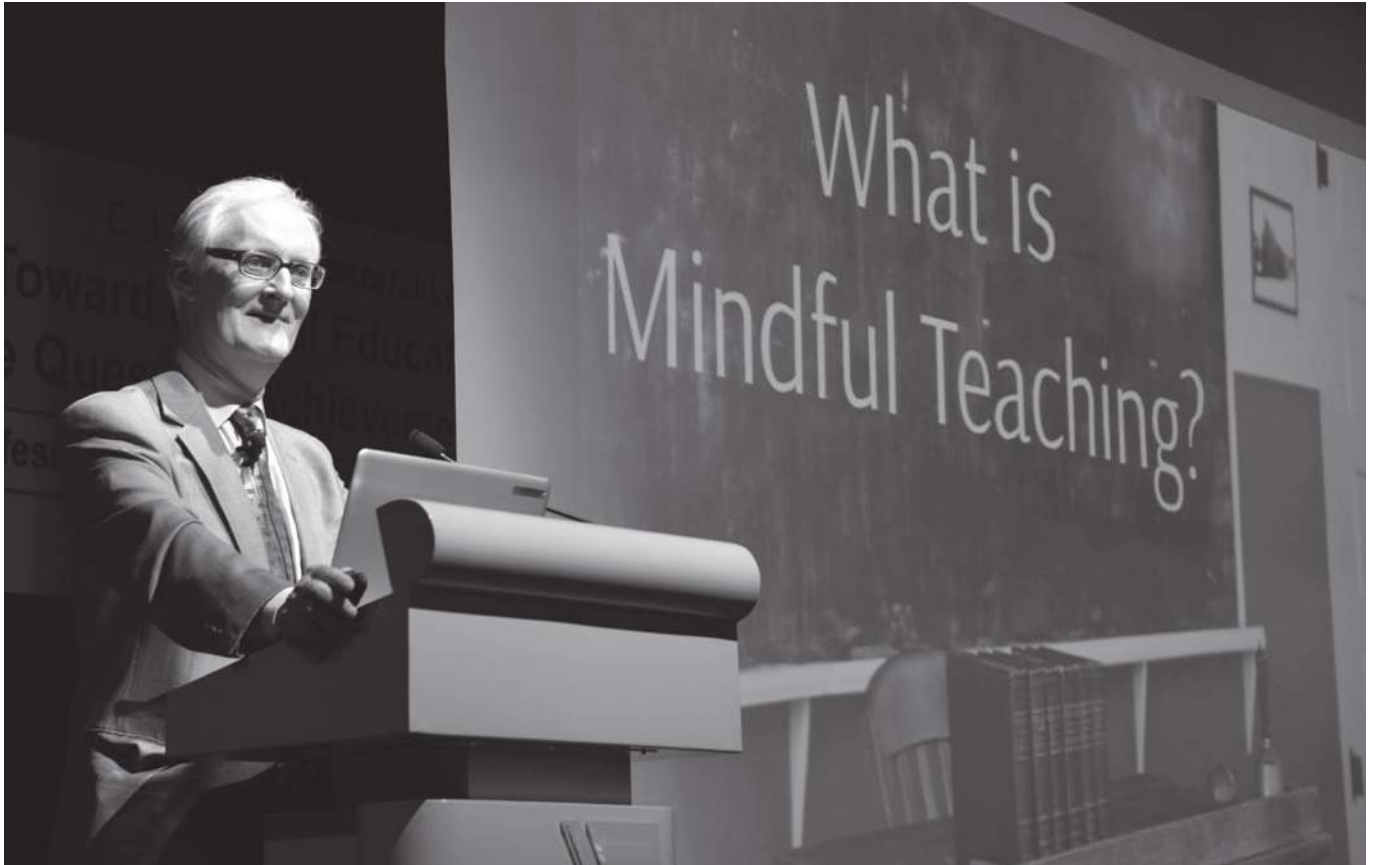
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MINDFUL EDUCATIONAL CHANGE: THE QUEST FOR ACHIEVEMENT AND INTEGRITY

PROFESSOR DENNIS SHIRLEY

6 MARCH 2014, PUBLIC LECTURE, CIVIL SERVICE COLLEGE, SINGAPORE



Introduction

RAPID CHANGE AROUND the world has led to increasing demands on teachers to figure out ways to absorb the cross-currents of change and direct them in a meaningful way to help children learn at the highest possible levels. Caring about achievement and making sure that kids are learning at high levels, and figuring out how to teach with full integrity are of equal importance.

The presentation starts with a discussion of the new international context. After describing the seven synergies that can help achieve mindful teaching, it examines the distracters that may influence mindful educational change and lead to “goal displacement”. At the heart of the presentation are 12 big ideas that arise out of 12 international case studies.

Four Zones of Convergence

We are living in four major zones of convergence that are rich in learning opportunities as well as pressures. The first is the convergence among various nations that involves trade, culture, economy and politics. The second is poverty to prosperity and there are many examples to back these two zones of convergence.

To name a few, there are more women who are now serving in governments internationally, maternal death is declining, fewer kids dying in the first 5 years of their lives, and nations are getting a grip on extreme poverty, even coming close to eliminating poverty according to the millennium development goals for 2030 set by the United Nations.

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The third convergence is technological and the pace of technological change is transforming our lives rapidly. Technology is not affected by many other factors such as certification. This is profoundly disruptive for how we put together professions and all kinds of work in social sectors. The fourth is educational convergence. Nations around the world seem to be developing a common grammar of educational change. For example, the Asian societies are borrowing the pedagogies, curricula and assessment tools from Europe or the US while some Western countries are borrowing rigorous didactic approaches from the East. We are learning from each other, swapping and borrowing ideas, and getting inspired by each other's work. We do this because we care about kids and their learning.

Seven Synergies of Mindful Teaching

Teachers are at the centre of these zones of convergence, facing pressure from students, parents, policymakers and technology. To quote from a Singapore teacher, "we eat and run; we eat and run", reflects the realities of many teachers' professional lives. How can teachers deal with these convergences? Seven synergies of mindful teaching can work together to help teachers get maximal impact on teaching and learning.

Open mindedness

It is about being open to divergent perspectives and finding ways to harmonise them. For instance, under Singapore's Student-centric, Values-driven educational phase, the seemingly old fashioned didactic models of transmission have some real strength in that teachers can sequence the academic content carefully and make sure that kids understand the knowledge at an expert level. To move the profession forward, there ought to be a platform where teachers can

share ideas, agree or disagree with one another in a professional setting.

Caring

The Student-centric, Values-driven educational phase advocates that every teacher should be a caring educator. That ethic of care ought to feature strongly in our profession so that kids are at the pinnacle of the work that teachers do and care about. In the movement towards educational standardisation, we need to remember that children also need our emotional support.

Stopping

Stop having situations like "we eat and run; we eat and run!" It is important just to have time to be with each other. To reduce stress, we can start a 10-minute guided meditation together whenever needed. We may find that our brains and bodies have a chance to calm down while we were meditating. We can look at the problems in our practice differently afterwards.

Professional expertise

Caring is not the opposite of professional expertise. A teacher cannot be open-minded, ask big, broad and deep questions, and not be considered professional. A mindful teacher's core beliefs, such as being caring, relational, embodying human beings, can be aligned with what they are doing in the classroom.

Authentic alignment

Teachers are experiencing "alienated teaching" when they do or are being expected to do something that they do not feel is right. They crave about the idea of authentic alignment between what they are doing and what their core beliefs are.

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Integrative and harmonising

Teachers want their everyday work to be harmonised and integrated with the initiatives from the government, professional associations and key stakeholders in education.

Collective responsibility

How can we get our parents involved in supportive ways? How can we get our principals to support teachers, rather than asking teachers to be compliant to different standards-based reforms? How can we make sure that we are all collaboratively supporting student' learning?

Distracters for Mindful Teaching

Due to powerful distracters, education reform is still not easily done even with these synergies of mindful teaching . A typical example of a distracter is the assessments conducted by international organisations. The Programme for International Student Assessment (PISA) from the Organisation for Economic Co-operation and Development (OECD) provides some great data, such as regarding students' well-being. However, PISA is only measuring 15 year olds, and we might be missing important information happening at the primary levels or at the levels when the students are older than 15 years old. For instance, Alberta in Canada is doing outstandingly well on the PISA examinations, but about a quarter of their students do not finish secondary school. Therefore, policymakers have to look beyond mere snapshots of the data validate.

Another international assessment distracter is the emergence of consultancy companies, which have been increasingly involved in education reforms. It may be fine for some economical agencies to get involved in international educational change, only if we agree

that the ultimate purpose of the education system is to prepare young people for the economy. But we must not ignore other factors, such as developing a sense of national identity, cultural identity, religious belief, compassion for those who are less fortunate. We need to look for critical data sources and understand where they are from.

Another distracter is the focus on standardised outcomes. Research has found that if organisations are fixated on outcomes and always prescribing various goals, people would be likely to start playing a game, manipulating the system to achieve higher goals. For example, whereas some schools could have a list of alternative curriculum and pedagogy for the kids in the grades without standardised tests, they tend to fall back to the traditional transmission model of teaching and learning when the kids are going to be tested. We can now begin to see how assessment starts driving the quality of the instruction.

So with all those pressures and distracters on educators today, how can we attain achievement with integrity? When we end our teaching career, we should be able to look at our students in the eye and say, "I might have gotten a few things wrong, but it does not really matter. I tried my hardest every day. I love my kids, and challenge them so that they can achieve."

Twelve Ideas of Mindful Educational Change

Scaling up mindful teaching of individual teachers to mindful teaching at a systemic level should be where education systems are headed. From my own fortunate research career in many countries, 12 ideas can be categorised into 3 groups which can help this scaling up effort. The groups are may be described at the micro-level, professional and governmental levels.

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Micro-level

1) Studying Learning—Mexico

In Mexico, teachers are working on developing tutorial relationships between students by teaching them to study each other's learning through active observation. The idea is that we often miss out on the possibilities inherent in one student assisting another to learn at a very high level.

2) Listening to Student Voice—Chile

The prohibitively expensive higher education in Chile has caused mob demonstrations among high school students. Some student leaders in this movement are now members of parliament or working at the Ministry of Education. They are going to rectify educational policies so that young people are not excluded. What we need to do for students does not need to be so dramatic, but we need to know what our students really need us to support them with.

3) Listening to Communities—Darwin, Australia

The school system in Darwin, Australia used to have a hard time reaching the aboriginal kids. What they did was to hire parents from the community to work as teacher assistants and help the white Australians understand the aboriginal kids. They customised the curriculum to reflect aboriginal cultures and values.

4) Calming—Massachusetts, USA

In the US, issues in some places seem to get increasingly adversarial and intense. For example, a teacher in Massachusetts once received 135 emails from a mother who was anxious about her son's learning. The teacher was exhausted and did not feel that she had anyone to go to. It is important to make sure that when teachers are getting exhausted, they have someone to turn to for help and help them calm down.

Professional Level

5) Developing Evidence-informed Networks—Norway

In Scandinavian countries like Norway and Sweden, educators are deliberately pairing schools with identical demographic patterns but with different strength areas so that teachers strong in different disciplinary areas are matched to help each other improve. In this case, data on teachers and students is used in an invitational way and for improving practice.

6) Connecting Communities to Schools—Texas, USA

In Texas, teachers are doing something called "Faith-based Community Organising" to reach out to parents in the naturalistic settings, such as religious communities, where they feel safe to talk to educators.

7) Corporate Educational Responsibility—Columbia

In Columbia, coffee growers are getting involved in supporting teachers learning from one another and developing their own curricula. This strategy also helped to connect the learners from where they are right now to future employment opportunities.

8) Transforming Learning—England, UK

In England, 200 out of over 300 secondary schools affiliated with the Raising Achievement Transforming Learning Network were able to raise the high school test scores and double the national average within a 2-year time period. They did it, however, largely through after-school tutorial and weekend tutorial programmes that just re-emphasised the traditional transmission model of education. After a long professional debate, they started innovating and getting the community involved to do experiential education. To transform learning, they also embedded arts education in almost everything they were doing.

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9) *Incessant Communication—USA*

To change education, we might have to argue with each other. While it is good to be harmonious, some good professional disagreements can also be good for the improvement of education. We have professional disagreements not because we are angry people but because we care for our students. It is important to have incessant communication based on the principle of incessant learning for the ultimate goal of improving the quality of education provided.

Governmental Level

10) *Student-centric, Values-driven—Singapore*

It is inspirational that in this highly pressurised international context the Singapore government introduced the “Student-centric, Values-driven” initiative. For the world of the future, one must be a person who is caring and engaged. We should bring our core values into teaching and learning, and enact them in everyday school life. Even though the education slogans and initiatives are our dreams and aspirations for kids, they can actually make an enormous difference. Martin Luther King did not say that he had a blueprint or an executive plan. He said, “I have a dream!”

11) *Abandonment—Alberta, Canada*

Alberta abolished high-stakes testing and has turned to formative assessment on students’ learning at the beginning of the year to see where they are and develop lessons accordingly. A big problem in educational change is that we often keep adding more things, forgetting that when we add something in, we must remember to take something out.

12) *Trusting—Finland*

The secret to Finland’s whole system is the unbelievably high levels of trust. The students trust

the teachers, the teachers trust the parents, and the parents trust the kids. Together, they form a beautiful feedback loop. The adversarial relationships that occur in many school systems disappear and everyone can work together to focus on learning. Hence, trust and high achievement seem to go together.

Conclusion

What has been discussed above are some thoughts about mindful educational change. At the micro level, are we studying kids’ learning processes in terms of what kinds of settings and activities could be given to them so that they can study each other’s learning? Are we listening to students’ voices? Education is not just about transmitting knowledge, but also making sure the kids have opportunities to raise questions, share ideas and become part of a problem-solving process. Are we listening to the communities? It does not mean agreeing with everything that people had said, but giving them a chance to share what their concerns are. If we are not getting optimal results with one sub-population group, are we exploring different ways of engaging them? At the age of heightened expectations and pressurised school environments, do we have any strategies to help teachers calm down?

At the professional level, how are we using evidence in students’ learning? How are we discussing divergent outcomes and expectations? Are we ready to face the possible implementation dip when trying something new? How do we make sure that parents and community members are part of the learning process? How can we build our business partners so they are part of the educational process? Are we setting up school environments where we are continuously talking with one another and sharing our impressions?

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At the governmental level, can we come up with inspirational messages, such as “Student-centric, Values-driven”, “Teach Less, Learn More”, “Thinking Schools, Learning Nation”? Those are slogans that can animate and drive a system forward. Can we stop doing so much all the time? If a kid instead is saying “we eat we run; we eat we run”, it is probably not going to be sustainable. How can we create systems where we are creating social trust?

Heraclitus said, “No man ever steps into the same river twice, for it is not the same river and he isn’t the same man.” We might seem to be the same person, but we actually had a variety of different experiences that would lead us to think a little bit differently. Mindful change is about being attentive to those small differences, which culminate in enormously enriching our lives as educators. We are facing these loveable, challenging, delightful, frustrating and engaging young people, and being paid to inspire them. Let’s never sell ourselves short and never lose sight of our common vision.

Question-and-Answer Session

Professor Wing On Lee served as Moderator, to the question-and-answer session that followed the public lecture. Here is a summary of the session.



Is there something that connects us internationally as educators? One of the things that could be happening with these zones of convergence is that we are finding not just rational attachment, but also an emotional attachment with teachers. Teachers in other jurisdictions are challenged by similar issues as yours. There may be a point of convergence through our common professional identities.

Audience member 2: I understand that it is individual teachers who respond to the mindful teaching seminars. How does it actually have a long-term effect on the schools from which the educators come? My second question is about achievement and integrity. There have been lots of discussions about countries that have scored well in the PISA assessment and how it is done. You alluded to the effect of tuition. What are your own thoughts about that and what do you see as the alternative that will take shape in the years to come?

Professor Shirley: The teachers participating in mindful teaching seminars are working in their schools in many different capacities. The general trend has been that people’s confidence in their professionalism has been enhanced. In the Boston public schools, many of these participants are taking on leadership roles throughout the system as assistant principals and principals. Unfortunately, in the US context, there has been a lot of skepticism towards the profession. A lot of pressure have been placed on educators. The government might just close a struggling school or fire the principal. This makes it hard to have a climate for mindful change because educators are in a state of heightened anxiety. So if we were to look for the impact of a mindful teacher, we will probably look in jurisdictions in Alberta, Scandinavia, or

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networks in the Pacific Northwest. The impact of the work has been uneven.

With regard to the second question, what would be advisable for the next phase is to look at more different sources of data to guide our decisions, including classroom observations, interview with teachers and survey data from students. At the end of the day, every teacher has to make the decisions about what he or she believes is the actual purpose of education. I would suggest humbly that the purpose of education is learning. We should be helping our students learn in diverse, broad and deep ways. We not only want our kids to be well-paid professional, but also have appreciation about the arts, care about the natural world, care about others who are less fortunate than them and care about their country. There are a variety of different purposes for education. But ultimately, it is always about learning.

Audience member 3: It seems to me that you are drawing a continuum with achievement being on one end and transformative learning being on the other. You are suggesting that some systems are too much on the achievement end and are trying to shift towards the end of transformative learning. My first question is to what extent do we balance these two ends of the continuum? My second question is about your view on a teacher's ability to tease out the qualitative dimensions of transformative learning.

Professor Shirley: We may want to harmonise different types of learning. But maybe it is also crucial that there is a little tension and discord with one another. For example, while quantitative research can give us one set of findings, qualitative research can give you another one. Then there is dissonance, a huge

catalyst for further inquiry and learning. Therefore, mixed-methods research would be a preferred way of research because we can develop different kinds of data. Triangulation of findings is one advantage of it but more importantly, contrasts and gaps can emerge from different methods, calling for our interpretive abilities.

To be transformative, we do not always have to be wildly innovative. Transformative teaching can be realised through a really good discussion that solicits students' opinions and ideas. It is very seldom that all of a sudden students can be projected into a different world of learning because of some big ideas or opportunities.

Another thing is to introduce an element of surprise every now and then. The teacher can surprise students with something almost completely unheard of. For example, a History teacher can dress up like Abraham Lincoln or Chairman Mao. We can also think of ways to help learners who like to do stuff through creating school environments where they can thrive. For example, the vocational schools in Finland enjoy a high status and are well-funded, probably due to their indigenous traditions around handicraft. By contrast, many other places regard working with hands as bad. It is important to recognise that all workers are honorable and we all make different contributions to the common wealth.

Audience member 4: In Asia, there are a lot of "tiger mums". Tiger mums and the society at large emphasise achievement. In some ways, it may not be wrong because the achievement of grades helps the child's mobility on the social ladder. How do you think this cultural mind-set will impact the teachers in terms of the quest for change? How can this message of the need

MINDFUL EDUCATIONAL CHANGE: THE QUEST FOR ACHIEVEMENT AND INTEGRITY

PROFESSOR DENNIS SHIRLEY

6 MARCH 2014, PUBLIC LECTURE, CIVIL SERVICE COLLEGE, SINGAPORE

for that change be communicated to the society and impact a change of mindset?

Professor Shirley: The push for achievement on measurable results is born out of the anxiety that children will not have a good chance when they enter the workforce or apply for higher education. We are in a dilemma. If we look at the large Asian American population in the US universities, the tiger mums have a pretty good argument that what they are doing is working well. However, many tiger mums in South Korea go to the Western countries to give their kids a Western style of education because their kids are too stressed from the expectations of their own system. One thing we could do is to let the kids have an intrinsic desire to learn, not to get the results to please somebody. Parents are often thinking about where their kids will be in 10 or 15 years. But we must also pay attention to where they are right now because it is a precious stage of life, full of opportunities. There is not a simple answer for this question. But we might start with some sympathy and some appreciation of the stage in life the kid is in.

EPILOGUE

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Introduction

ON BEHALF OF the Office of Education Research at NIE, we would like to thank CJ Koh Professor Dennis Shirley, all scholars, policymakers and practitioners for their insightful ideas. We would also like to thank Associate Professor Ee Ling Low and the editorial team of the *CJ Koh Professorial Lecture Series* for summarising and consolidating the important insights from Professor Shirley's visit.

This series is crucial for exchanging and sharing knowledge and insightful ideas across key players in educational community both locally and globally. The CJ Koh Seminar centred on the issues of the changing demands on the educational communities around the globe and strategies that can be used to prepare our

teachers to face the challenges of convergence of education and improving student learning outcomes.

Two of the key components of education system in Singapore are children and teachers. Any reform in education involves a strong focus on the development of both teachers and students. This epilogue focuses on the needs for educators in the 21st century to recreate themselves to meet the challenges of the new era. Teachers feel exponential changes, which are emerging socially, culturally and technologically in this era, and affect education policies, educators' perspectives and student outcomes.

There is also an increasing demand from teachers to understand and adapt to the crosscurrents of changes

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in order to improve student learning. This has marked the emergence of concept of convergence pedagogy.

As emphasised by Professor Shirley, convergence pedagogy becomes an important focus of the present era educational reforms as teachers are facing increasing pressure from students, parents, policymakers and new technological advances. They need to understand and anticipate the direction where education is converging and decide whether convergence pedagogies can really be created.

The key element of the convergence pedagogy is mindful teaching that acts as a tool to make teachers aware of the subtle differences in individual students and enrich their lives as educators. Several salient points emerged during the discussions including mindful educational change, teachers as learners, and evolving paradigms of learning. Together, they are helpful in improving our understanding of mindful teaching strategies and the roles of policymakers, educators and teachers in bringing about educational change in educational settings.

Mindful Educational Change

In Singapore, mindful educational changes are seen from the perspective where schools are places that inspire learning, and where innovations occur and schools have an inclusive mission. Schools are also where policymakers, teachers and the immediate community collaborate in their efforts to support the demands of teaching and learning.

Professor Shirley shared about the strategies that can help educators to improve on mindful teaching through various case studies and which show how teachers can bring their core values and beliefs into the classroom.

It is important to realise that to achieve reforms in education, personal attributes of teachers, such as open-mindedness, a caring disposition, ability to de-stress and professional expertise, are key. Also important is the involvement of the government, teacher educators and communities, the development of different paradigms of learning, and being cognisant of the fact that teachers are also learners. Thus, as argued by Professor Shirley, collaborative efforts at different levels are important to bring inspirational changes and to build a community of learners and professionals who are well prepared to face the challenges of a changing era.

Teachers as Learners

If teachers can be empowered in their learning and understand the shifts in the pedagogical paradigm, it is possible to actualise the goal of “helping every learner succeed”. The Singapore education system makes sincere efforts to improve teacher quality and provide continuous teacher learning. The Academy of Singapore Teachers introduced the concept of the Professional Learning Communities (PLC) into Singapore schools for the collaborative learning of teachers and as a means of increasing student outcomes.

Dr Daphnee Lee, Dr Wan Ying Tay and Ms Helen Hong elaborated that teachers in PLCs reflect on their pedagogical practices and learn from mentors in order to improve on their practices. PLCs help to bridge the ability gap in learners and provide leadership skills and higher-order thinking among teachers. In high-performing education systems, such positive reforms in education and teacher quality can be brought about through mentoring and reflective professional dialogues. It is also important to comprehend that the shift in pedagogical practices can only be achieved

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when the teacher understands the evolving nature of paradigms of learning.

Evolving Paradigms of Learning

Educators design pedagogy on the basis of three paradigms of learning, that is, behaviourism, cognitivism and social constructivism. Although these paradigms have different approaches, they strive to meet the common learning objectives of content mastery, higher-order thinking skills, soft skills, leadership skills, citizenship, values and identity.

The paradigms of learning are also evolving in education. As suggested by Dr Wong Lung Hsiang and Dr Jan Mingfong, teachers require the development of a new framework to study the interplay between the (individual) cognitive and socio-cultural levels of learning environments.

These paradigms of learning act as a guiding framework for our evolving pedagogies and help teachers evolve their practices to help all students equally.

Conclusion

The education system of Singapore aims to ensure excellence in education and strives to improve teacher quality. Teachers are encouraged not only to be teachers but specialists and leaders in their profession. Their core values and beliefs help ensure care and compassion pervade their teaching. But with the rapid advances in technology and the advent of globalisation, it is important that teachers are supported at various levels—individual and societal.

There is an overall need for mindful change in education, which requires a convergence of focus of

all stakeholders within the educational community. Efforts should be focused on enhancing policymakers-family-school-community connections in order to raise every student's chances of performing well in schools and also to improve teacher quality in the educational settings. The collaborative effort of educational communities and policymakers can help us to collectively reach the pinnacle of teaching excellence and consequently maximising learning outcomes.

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Singapore

About the CJ Koh Professorial Lecture Series

The *CJ Koh Professorial Lecture Series* was launched by the Office of Education Research in 2011. It was conceptualised for the purpose of knowledge building and sharing with our internal, external and international stakeholders in education, who can benefit from the information shared during each CJ Koh Professorship visit.

Each year, outstanding professors in the field of education are hosted by the National Institute of Education under the CJ Koh Professorship in Education programme. The CJ Koh Professorship has been made possible through a generous donation by the late Mr Ong Tiong Tat, executor of the late lawyer Mr Koh Choon Joo's (CJ Koh) estate, to the Nanyang Technological University Endowment Fund.

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