

# PRINCIPIA

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*Leading* **L** *earning*

## President's Message

This is last in the series of 5 on the different areas that school leaders are called on to spearhead or show the way. We had started with Leading Culture then Leading People in 2014; we celebrated SG50 looking at Leading Nationally and Leading Change; and most appropriately we come back this year to the heart of all that we do – Leading Learning.

We began by interviewing two principals who have had to lead their schools into a new way of learning. You will read Foo Suan Fong's immensely down-to-earth approach in bringing a school out of the traditional 'O' level track into the Integrated Programme. You will also appreciate the amusing honesty of Lim Boon Cheng as she crafted a Future School out of a non-existent entity and met, on the way, the frank and unvarnished reactions of students to the challenges thrown at them. Yet despite the official categorising of their schools, these two school leaders showed that beneath it all, the enterprise is not that different – that never-ending journey every educator takes into finding out how students learn.

But it is not only students who learn; principals also learn as you will find out from Ng Pak Tee. Pak's Tee's research into school leadership and its impact on student learning has made his input at the Leaders in Education Programme and his contribution to its design an integral part of a principal's training. His encounters with aspiring principals have sharpened his clarity on what school leaders need to do.

As educators, we also know that assessment is essential to learning so we are glad we have at the helm of the Singapore Examinations and Assessment Board someone who's taught in school, led a school and helped others lead schools. From a different vantage point then, Tan Lay Choo will illustrate the valuable and integral link between assessment and learning.



**Chan Poh Meng**  
President, Academy of Principals (Singapore)

## Contents

<b>Foo Suan Fong</b> <i>Mr Story-Teller: Management Lessons from Fists and Fingers</i>	3
<b>Lim Boon Cheng</b> <i>The I-Principal: A School's Journey into the Future</i>	8
<b>Ng Pak Tee</b> <i>What Principals Must Have: The Skills of a CEO, the Heart of a Teacher</i>	13
<b>Tan Lay Choo</b> <i>Examining Singapore: Why Assessment is Needed</i>	18

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# FOO SUAN FONG

*"If your actions inspire others to dream more, learn more, do more and become more, you are a leader."*

- John Quincy Adams, one of Dr Foo's favourite quotes

# Mr Story-Teller: Management Lessons from Fists and Fingers

Dr Foo Suan Fong, Principal of Dunman High School, stretches out his hand, using his fingers and a pen to illustrate a lesson on leadership. Imagine that all five fingers represent an individual, and the task is to hold a pen.

If the thumb holds the pen, it is very stable, he says, demonstrating how the thumb engulfs the pen in a firm grip. It means this person can be entrusted with the task and will perform well. Now, if the pinkie holds the pen, the ring finger and middle finger will automatically bend to support the weight. It signals a weak candidate for the task, who would invariably require help from others, he explains.

But who is a good partner for the pinkie? If it is paired with the thumb, it would be overwhelmed, he says, showing how the thumb presses on the pinkie to hold the pen. An optimal partner would be the ring finger, as it would be an equal and smooth partnership going by the ease with which both will hold on to the pen, he elaborates.

Lastly, if the middle finger holds the pen, both the index and ring fingers would

naturally stick out. This means trouble, he says, as the jutting out fingers represent people who will be unhappy if the task was given to a certain individual. They want to do the job too.

It is a simple finger exercise, but reveals a lot about leadership and managing people, says Suan Fong. "Leadership is important," he says, as the success and failure of any organisation hinges on the management skills of the leader.

Like how the finger story goes, choose the wrong person for the task and things will go awry. Choose wisely and the path to success will be smooth. "You have to know the strengths and weaknesses of people, as well as understand group dynamics and relationships, if you want to develop your people to their fullest potential," he shares.

This means the leader has to be a good judge of character. "Through talking to people, all I need is 15 minutes to assess a person's personality. It has become an instinct over the years," he says, using a Chinese proverb *yue ren wu shu* (阅人无数) to show how he learns a lot by reading people.



Scary as that might sound, Suan Fong is far from intimidating. During the two-hour interview at a meeting room in the school library, he comes across as affable and approachable, even endearing as he tells story after story about his philosophies on leadership and life.

Sitting on the edge of the sofa, a favourite position during the interview, his enthusiasm is palpable. He shares how he motivates staff and students with 'gifts', his lessons learnt from a long list of mentors, past students who still visit him every Chinese New Year and why the school has an umbrella as a corporate gift.

"I'm a story-telling principal. I have many funny and interesting ideas," says Suan Fong with a wide grin. He never fails to use any opportunity – from assembly speeches to meetings with staff and students – to tell his fabled tales.

In fact, he compiled many of his stories into a book, *Telling Stories, Applying Principles: A journey of school management*. In it, there are more than 25 principles on school leadership, using stories and objects from daily life. It was published in 2009, the same year he became Principal at Dunman High, a Special Assistance Plan (SAP) school with a six-year Integrated Programme (IP).



## NOT TOP STUDENT NOR SCHOLAR

As a Dunman High alumnus, he says he was glad to return to his alma mater. "I wasn't the top student, playing was a top priority," he shares candidly, adding that his report book is on display in the school.

During his school days from 1973-1978, the school was called Dunman Government Chinese Middle School and it was a Chinese-language school. He studied all subjects in Chinese and took English as a second language. "I scraped through English with a C5 grade," he says, which allowed him to enter the National University of Singapore (NUS) where he majored in Chinese Studies, Japanese Studies and minored in Political Science.

But he struggled in university. For the first time, he had to learn in English for a heavy-going subject like Political Science. "I suffered a lot, studied non-stop seven days a week. I learnt to use very simple and plain English to write," he notes.

Fortunately, he did not fail. Having good professors such as Professor Chan Heng Chee, who went on to be one of Singapore's high-profile diplomats, also helped. He invited her to be a guest of honour for a school event three years ago.

He credits his bilingualism today (although he keeps saying his English is still not good enough) – not just in language ability but personal philosophy – to his university education where he learnt a blend of eastern and western theories in world affairs.

"I'm a bit *luan*," he says, using a Hokkien word to describe messy confusion, as he mixes eastern philosophy of Confucius on character building and emphasis on education with western philosophy on the art and science of teaching.

When he graduated from NUS in 1985, he decided to do something which he liked – teach. He joined the Ministry of Education (MOE), and was posted to Anderson Junior College where he taught Chinese language and literature. After almost six years, he headed to MOE headquarters as a curriculum specialist in Chinese language in the next decade. While there, he was involved in several policy changes including allowing more students to take Higher Chinese as well as editor of magazine *hua wen lao shi* (华文老师) – Chinese Teacher.

During this period, he also pursued a Masters of Philosophy in Chinese Literature at the Hong Kong University from 1995 to 1997.

*“I wanted to let the teachers know what the outside world looks like, learn the best practices from these companies in terms of setting standards and monitoring staff and student welfare.”*

“It was a very exciting period,” he says of the handover of Hong Kong from Britain back to China in 1997. “I could see first-hand how the British reacted to the Chinese government, how the Hong Kong people felt, the changes in the social fabric and people’s psyche.”

The political transition not only brought out the political science graduate in him but also taught him a simple lesson on governance. If people are unhappy, they will protest. At times, this will lead to public demonstrations. What is required, he believes, is good leadership that evolves with the needs of the people and provides various pathways to success. It was a lesson he brought back to the ministry as it could be applied to education, in helping each student learn and progress at his own pace.

In Singapore, he returned to his familiar role as a curriculum specialist and thought he would stay there. But in 2001, he was posted to Jurong Junior College (JJC) as Vice Principal. “After almost 10 years away from being in a school, it was a shocking thing to be back,” he says.

At the headquarters, he was doing a “very operational job” of policy work and developing curriculum, organising seminars, writing and presenting papers. At a school, it was vastly different work, leading an organisation and dealing with teachers, students and parents.

Before he left the headquarters, then-Director-General of Education Wee Heng Tin gave him four tips in leading a school. One, bring the school to the next level. Two, develop the staff to make them future leaders. Three, provide opportunities for the students to shine. Four, learn fast from JJC principal Ching Ai Kim as she would be retiring soon.

It was a steep learning curve in the two short years that he was there, and he appreciated the many opportunities given to him by Ms Ching. Till today, he and a group of teachers meet her regularly, he shares.

His stint at JJC paved the way for his next posting in 2003, as Principal of Nan Hua Secondary School – now called Nan Hua High School. One of his first big tasks was moving the school to its new campus which



was officially opened by Prime Minister Lee Hsien Loong. In his six years at Nan Hua, a SAP school, he introduced several changes that earned the school a School Distinction award, given to schools with well-integrated and sustainable processes that have improved how students learn and develop.

For instance, he made sure as many as 80 per cent of students received four bonus points to enter junior college, by taking Higher Chinese and relevant co-curricular activities (CCA) that develop leadership skills. He also introduced work attachments for students. Students did so well over the years that Nan Hua became even more popular, he reveals.

He did not just focus on students. He also wanted to develop his teachers, bringing them to visit private sector companies such as BreadTalk and Fuji Xerox – companies which he visited when he was on a six-month learning programme for school leaders at the National Institute of Education (NIE). “I wanted to let the teachers know what the outside world looks like, learn the best practices from these companies in terms of setting standards and monitoring staff and student welfare,” he says.

Summing up his education philosophy in Nan Hua, he writes five Chinese words, *de zhi ti qun mei* (德、智、体、群、美). Individually, they mean moral, cognitive, physical, social and aesthetic. Together, the emphasis is on

an all-rounded education that covers moral studies (character & citizenship education), intellectual studies, physical education (PE), CCA and the arts.

While running the school, he also earned a PhD in Chinese language and literature from Fudan University in Shanghai in 2007.

#### **A WORK OF ART**

When he arrived in Dunman High which runs an integrated programme (IP), it was, in a way, a combination of both his previous postings in a junior college and secondary school. “It is very challenging. As an IP school, we have to ensure there is curriculum alignment in their six years here,” he says.

Apart from the usual subjects in math, sciences and humanities, the school also offers third languages and elective programmes in art and music. At the junior college level, it becomes more complicated with many more Chinese language subjects including Chinese Translation, China Studies in Chinese and General Study in Chinese, which is General Paper (GP) in Chinese.

While he sets high standards for students, he is equally demanding of teachers. “I tell them to treat every piece of work like it is a piece of art, not a piece of task,” he says. “I don’t tell them what is art, but you must know. An assignment is not just to complete a job, but to complete a piece of art and explain it to people.”

To motivate them, he has developed a 3Es concept of “Empower, Encourage and Engage”. For top performers, he believes in empowering them with the autonomy to perform what they think is best for the school. For the average performers, he aims to encourage them to do better. And for those who are not so good, he engages them with ideas and ways to produce their work of art.

New teachers to the school will be given “three gifts” to ensure they can be artists too, he says. One, a piece of advice from him. Two, a contact number or e-mail of someone who can help them in their task. Three, a reference article that they can learn from.

Similarly, he also gives presents to motivate his students – from personal cards to bookmarks before their major exams. “I like books and I want them to read. By giving them a bookmark, it is like the principal

*“A first class school is based on culture, a second class school is based on management, and a third class school is based on pressure.”*

accompanying them to read and study,” he explains.

Apart from seeking excellence from staff and students, he is also keen to build a unique school culture at Dunman High which turns 60 this year. He believes the long-term success and development of a school is based on its culture. “One year is based on luck, 10 years is based on structure and system, and 100 years is based on culture,” he says. Putting it another way, he adds: “A first class school is based on culture, a second class school is based on management, and a third class school is based on pressure.”

But culture is intangible and hence, building it is difficult. But he is intent on this goal, starting with events, products and improving the school environment. For instance, the school developed a mascot, logo, cards and corporate gifts including T-shirts and an umbrella. And there are stories behind all these products, he says, sharing the significance behind the umbrella.

First, it is a helpful tool, sheltering people from rain or used as a walking stick. Second, it is also useful as it can be lent to students during downpours. Third, it signifies consistency especially when it rains during a major event and everyone carries the same umbrella. Fourth, an open umbrella represents a shield during a crisis. Last, during peace times, a closed umbrella shows solidarity.

It may be an ordinary product, but it showcases the extraordinary spirit of the school, says Suan Fong who believes an inspirational leader can also help develop the school culture by instilling the right values.

Using the Chinese phrase *ling dao* (领导) for leader, he says it is a combination of two words – lead as well as guide and teach. And he hopes to lead the way by showing – and not just telling stories. “As a leader, you don’t do just visionary work. You must also do some dirty work,” he says.



# LIM BOON CHENG

“Our guiding principle is simplicity. The focus is still on your pedagogy, whether you can inspire your students to learn.”

## The I-Principal

### A School’s Journey into the Future

One day, a Primary Four pupil amazed and amused Ms Lim Boon Cheng. He walked up to her and said: “Ms Lim, I know what is the world’s longest word.”

“What is it?” she asked.

“Pneumonoultramicroscopicsilicovolcanoconiosis,” he said, pronouncing the medical term of Silicosis accurately, without missing a beat. Silicosis is an occupational lung disease caused by inhaling silica dust.

Impressed by the pupil, Boon Cheng inquired: “Who taught you this word?”

“I learnt it on my own,” he replied.

A little stunned, she quickly queried: “How did you do it?”

“I checked the online dictionary,” he said, flashing a toothy smile, clearly proud of his achievement.

Boon Cheng was still curious. “But how did you know how to pronounce this long word?” she asked with a puzzled knit of her brow.

“Oh, there was an audio thing next to the word teaching you how to pronounce it,” he answered with a big grin, happy to show off his tech-savvy skills.

“How long did it take you to learn?” she continued to quiz him.

“Just three days,” said the 10-year-old pupil, a keen learner who shows interest outside the academic realm.

Boon Cheng shares this example to show how technology is changing the way students learn as well as piquing the interest of students in something they may not be interested in – studying. “When we talk about self-directed learning or independent learning, you need a tool. In the past, it could be an encyclopedia. In a Future School, it is a laptop with connectivity,” says Boon Cheng, Principal of Beacon Primary School, part of the FutureSchools@Singapore (FS@SG) programme.

The school, located in Bukit Panjang, integrates technology into teaching and learning to not only deliver a more engaging learning experience but also equip students with skills that will be needed in the future digital workforce. Beacon Primary is one of eight schools under this pilot project that was announced in May 2007. But among the eight, Beacon is the only new primary school while the rest were existing schools that converted into a future school.

For Boon Cheng, it was an experiment of a lifetime. She not only had to build the school from scratch, as in the physical building, but also develop the novel teaching concept. “I’m a pre-generation X (baby-boomer generation)



leading the millennial generation (students); it is a very big gap,” says the youthful-looking 58-year-old during the interview in her office.

While sharing the unprecedented journey in developing a Future School, her trademark chuckle can be heard often as she recalls several hilarious episodes. Among them is a caricature of Boon Cheng scanning the future in yet-to-be-invented “Google glasses”. Laughing as she shows the cartoon drawn by an artist during the initial envisioning exercise in 2007, she says it is almost impossible to predict future trends.

“The future keeps moving, we will never arrive,” she notes, but her job is to make sure students are resilient and adaptable to rapid changes in this globalised world.

### FUTURE SCHOOL PROJECT

It started with a phone call while she was visiting the United States in late 2006. She was taking a break after her Masters programme. On the other end of the line was a senior official from the Ministry of Education (MOE) back in Singapore. “Would you go to a future school?” the person asked during the conversation to discuss her next posting.

As she had been away for the past year studying Educational Leadership and Administration at Institute of Education, University of London in England, Boon Cheng had no clue what was a Future School. So she enquired: “Which school?”

“Future school,” came the reply, which did nothing to enlighten her.

This almost comical question and answer went on for a while until the senior official explained that she was to lead a new type of school that was not built yet. Once she got the message, she immediately said yes. But she was filled with excitement as well as trepidation about going into the unknown.

Her official posting began in December 2006, and the first batch of Primary One pupils started school in 2008. In between, she was busy overseeing the construction of the school and conceptualising with the FS@SG project team on how to harness technology to design a technology-enriched and holistic curriculum, incorporating 21st century competencies. “We had some hazy ideas, but there was a lot of uncertainty. There were no examples, no blueprints to follow,” she notes.

She tried to look for existing examples overseas. There were hardly any and one she found focused on infrastructure such as solar panels and wireless connectivity rather than teaching pedagogy. With a completely blank canvas, Boon Cheng, her core staff and the FS@SG project team began brainstorming ideas on how to integrate technology into teaching and learning. They were guided by four key principles – simplicity, sustainability, scalability, and ease of transferability.

The curriculum would be the same as that in other schools, but technology would be seamlessly and pervasively weaved into teaching and learning, with pupils exposed to various digital platforms from Primary One, she shares.

The goal is to teach pupils ‘how to learn’ and move pupils from being ‘users to

*“Teachers used to be the go-to person for knowledge, but now students can find out on their own. Our role is to be a pathfinder and help students find the way forward.”*

producers’ of technology. This means they will not just be consumers of technology but also learn how to be producers of content, for instance, by producing content online in the form of digital stories.

It will go from ‘learn to use’ to ‘use to learn’, says Boon Cheng. So pupils will first be taught how to use the technology such as laptops and will go on to use these devices and the online resources to extend their learning. All pupils from Primary Four onwards will have their own personal learning devices such as a laptop.

The focus, she points out, is still on learning the national curriculum and 21st century competencies. Technology is a tool to make learning come alive while at the same time ensuring pupils keep up to date with digital trends. With technology, the hope is also that more pupils will pursue self-directed learning where they learn from online websites and resources on their own. “If I teach you how to learn and how to do research online, it will be more useful than just teaching you the syllabus,” she notes.

Asked if technology can also be distracting, she replies: “There is a difference in self-directed learning and self-indulgent entertainment. In our environment, there are a lot of distractions. In our structured way of teaching, we teach pupils that technology is used for learning and not just fun and games.”

She also emphasises the need for pupils to learn to be ethical, responsible and discerning users of technology. “Technology,” she adds, is “a great social leveller”. It is no longer about the ‘haves and have-nots’ in terms of being able to afford technology. The divide will be between the ‘know and know-not’ with the latter on the losing end.

After developing the school concept, Boon Cheng had to market the school to parents so that they would enrol their children in it. There was quite a bit of confusion. “People did not really know what is a Future School,” she says, recalling her own puzzlement during the phone conversation on her posting. “Some even thought it was a virtual school.” A teacher she interviewed was under the impression that the school would be super high-tech and filled with cool

gadgets, a la James Bond, where pressing buttons would make various things appear.

Fortunately, parents saw merit in the school concept and 240 pupils were enrolled for Primary One in the first cohort. Today, the school has 1,400 pupils in all levels. Pupils took to technology like fish to water. “They are digital natives. You teach them one step, they will go two steps,” she shares, giving her team the confidence that the school was moving in the right direction. But the school is continually evolving to keep pace with technological changes. For instance, it will introduce coding to encourage computational thinking to Primary Four pupils this year.

The school is also among the first-movers on non-technology items such as organising five to six-day overseas learning journey to places such as Shanghai and Sarawak for all Primary Five pupils. “For some of them, it could be a life-changing experience. They are able to experience and explore different cities and cultures,” she says, adding that those going to Suzhou will even attend school there.

### NOT A TECHNOLOGY SPECIALIST

While she is leading a Future School that focuses on technology and what is trending online, she is not exactly into computers or programming. “I’m not a very technology-savvy person,” she confesses. “I can see the power of technology in how it can be used in education, and that is my role.”

Beyond that, she calls on the expertise of her team members of specialists among the deans, heads of department and teachers to spot the latest trends in technology and update the curriculum. She calls it “distributed leadership”. “There are different people in different functions, everyone has a role to play,” she says. There is, for example, a Dean of Development, Research and Technology, and a Dean of Curriculum and Pedagogy.

As for Boon Cheng, she draws on her diverse experience in teaching various schools and levels, a career that began in 1982. She started as an accounting and management teacher. Her first posting was to Raffles Junior



Courtesy of Lim Boon Cheng

# NG PAK TEE

“How can we expect inspired students without inspired teachers?”

College for two years, Victoria Junior College for the next six years, and subsequently to Seletar Institute for almost seven years. In those 15 years, she taught a wide spectrum of students.

“I became a better teacher after every posting,” she shares. At Seletar Institute, she learnt that students required a different way of teaching. It helped to teach them meta-cognitive skills such as how to pay attention, listen and verbalise their thinking. “It was learning to understand the learners,” she says, adding that each of her postings made her feel she was “promoted to a new level of incompetency” – into a new role that she had no experience in.

After Seletar Institute, she moved to Northview Secondary School as Vice Principal – her first management-level role. She was there from 1997 till 1998. Then, she was posted to Pasir Ris Primary School as Principal till 2005. It was her first time working in a primary school, and she asked around for advice from the experienced primary school principals. One hilarious, yet practical, tip from a senior principal that she could still remember was not to wear skirts with elastic bands as young children may tug and pull at your skirts to get attention.

While there, she also realised that primary school pupils tell the unvarnished truth – or rather the truth from their perspective.

Once, a shy Primary One boy walked close to her and pointed out that Boon Cheng had permed her hair. Flattered by the attention, she asked the boy: “Is it nice?”

“No, it looks like a cauliflower,” came the brutal reply from the seven-year-old.

She was too shocked and tickled to respond, and the pupil sidled away. But she has never permed her hair again, keeping it in a chic bob instead. This episode also taught her the importance of understanding the learner’s perspective. So today, when she asks pupils for feedback on the use of technology in school, she expects nothing but the truth – from their perspective.

A Primary One pupil once told Boon Cheng she loves using the laptop to do her work as she can easily delete wrong answers instead of having to waste time erasing. Easy deletion was not one of the stated official advantages in using technology, she notes, but it is beneficial nonetheless. It not only saves time but also helps pupils seek better answers due to the ease in erasing wrong or not so good answers. This encourages pupils to reflect on their answers, making contemplation and creativity less onerous.

“It works to their needs, simple as that,” she says. “We use big words such as self-directed learning or collaborative learning to explain the benefits of technology when in fact life is very simple – it’s only made complicated by adults.”

Such simple responses also cheer her, as it shows that technology is making an impact on pupils. Indeed, older pupils have also reported putting their skills to good use such as helping their parents prepare powerpoint slides for presentation. One pupil even learnt how to play the guitar by watching instructional videos on YouTube, she adds.

Now, pupils are asking for a Beacon Secondary School, she says, so that they can continue their education in a similar fashion – fusing technology with learning. But she tells them not to worry. Once they are grounded in this foundation, they can do their own self-directed learning in any school, any time and anywhere as they have been equipped with skills for life-long learning. For those who miss their *alma mater*, the school has started Beacon Network for alumni to stay in touch and build up a strong and vibrant school culture.

The school has also published two books to record its future school experience. The first was published in 2010 and was translated into Japanese by an academic there, and the second book in 2012.

“Technology empowers and narrows gaps,” she says, adding that it is also aligned with Singapore’s vision to be a Smart Nation. Technology also changes how students learn. “Teachers used to be the go-to person for knowledge, but now students can find out on their own. Our role is to be a pathfinder and help students find the way forward,” she says.



# What Principals Must Have:

## The Skills of a CEO, the Heart of a Teacher

A 'dead' teacher kills his students, while an 'alive' teacher keeps the class engaged, says Associate Professor Ng Pak Tee from the National Institute of Education (NIE). He is referring to a boring and uninterested teacher versus an interesting and passionate teacher, which can make all the difference in how students learn.

"A teacher who is alive can spark students' interest in the subject he is teaching," shares Pak Tee, NIE's Head of Policy and Leadership Studies and Associate Dean of Leadership Learning. "On the other hand, if students have a 'dead' teacher, they will all 'die' together. A 'dead' teacher can kill the learning interest of a student."

With this in mind, it is not surprising that Pak Tee is intent on being alive and

engaging for his students who are, in fact, educators themselves – vice principals and principals. He oversees the annual six-month Leaders in Education Programme (LEP), which was launched in 2001, at NIE. He shares illuminating concepts, illustrated with ordinary objects and everyday life such as how teaching is similar to feeding a young child and likening a microwave oven and traditional wood-fire oven to education tools.

While he is a master of metaphors, Pak Tee is also the grandmaster of education given that he teaches principals. Tell him that and he laughs it off, saying he is only helping principals remember their calling of being a teacher first and administrator second.

It is a philosophical message that he repeats often during the interview where he reflects on why principals must "retain a teacher's heartbeat" even though they ought to develop the skills of a CEO, and the importance of having inspired educators who will inspire students to learn. "As educators, we should not simply do things to earn the applause of the world. Do good, rather than look good," he urges the profession, so that it will "safeguard the nation's future and its social fabric".

He certainly has earned the applause of the educators he teaches. Standing in the midst of Suntec City's crowded convention centre, they bowed and enthusiastically shouted in Chinese, *lao shi zai jian, xie xie lao shi* (goodbye and thank you, teacher). As everyone turned to stare, the teacher, Pak Tee, smiled and returned the bow. They were at Suntec City for an education conference.

"It is important for students to respect their teachers and this is an extension of that practice," he explains during an interview before his keynote address at the conference where he engages the audience with stories and 'tweet-able tweets'. But he was still a little amused that they would bow and greet him outside of the classroom, in front of so many conference participants, he adds.



### THE TEACHER OF PRINCIPALS

Pak Tee joined NIE in 2001. Before this, the Cambridge graduate taught Mathematics at Hwa Chong Junior College for four years and was an officer in the Ministry of Education (MOE) for three years. He also received an MBA from the University of Leicester and a PhD in management from the University of Bradford.

On his decision to leave MOE for NIE, he says he wanted to continue teaching in a different capacity. "It is good to teach young people, but it is also good to develop the capabilities of teachers and leaders."

At NIE, the LEP trains education leaders to develop critical decision-making and management skills so as to help them deal with high levels of complexity in governance and policy implementation. "It is a platform for school leaders to do some serious contemplation and take stock of the system, to affirm and re-affirm their values and beliefs as well as pick up knowledge and skills," he notes.

After they complete the programme, he hopes they will be able to clearly say, "This is who I am and this is what I stand for." This is crucial as how leaders think affect how they act, he explains.

As part of the LEP, participants are attached to a school where they will be mentored by the principal there. A key feature of this attachment is the Creative Action Project (CAP), in which LEP participants

have to envisage what the school will look like in 10 to 15 years' time and implement a component of this 'future school' in a prototype that is feasible now. To do so, they will have to challenge current beliefs about education and school leadership as well as explore new concepts that can transform the school system in future. They will also need to consider global and geo-political factors that could influence the country's development.

The aim of this project is not just scenario planning, but also a test of leadership. "They have no rank, position and authority in the school; how would they try to get things going?" notes Pak Tee. "They must try to influence people with their ideas and people-skills. If they can work well with people on the ground during this project, they will be much better off when they are put in a position of authority later."

This project also showcases that leadership is more than just pulling rank. "People work with you not just because you are ranked higher than they are, but because they respect you for who you are, for your ideas and how these ideas can benefit the school," he says.

Some innovative ideas that have emerged from these projects, he shares, include having a digital art gallery in schools where art pieces are scanned and displayed on a portal, and getting top performing students to design tests so that they understand what the questions are looking to assess.



From participants' feedback, they learnt how to conduct 'futuring', contextualising projects to individual school conditions, being flexible and adaptable and collaborating with others, wrote Pak Tee in a paper.

Pak Tee describes 'futuring' as a strategic capability to scan horizons and exploit future trends with advance planning – critical competencies for education leaders in this rapidly changing globalised world. One participant said the futuring aspect was extremely useful as "the economy of the world (from) 2025 will be run by students entering schools now, so we need to make sure we prepare our schools for that future".

The projects also taught them how to manage people and their own expectations, as well as learning when to take control or when to let go so as to empower people. It also taught them to be flexible in their thinking, said Pak Tee in the paper. "Keep the CAP vague, mind-boggling and challenging. If we want our students and teachers to take risks, be innovative, step out of their comfort zones, teach differently, do something they have not been explicitly taught, we have to know how difficult it is, and we have to be the ones to get rid of the shackles that binds us," wrote one participant.

While change is necessary, Pak Tee also reminds educators that the *raison d'être* of teaching remains largely unchanged all through the years – to help students learn.

### TEACH LESS, LEARN MORE

The education system has been evolving with a "shift from quantity to quality" in teaching and learning, notes Pak Tee. Today, the emphasis is on critical thinking and creativity rather than just rote learning. It started in 1997 with the slogan 'Thinking Schools, Learning Nation'. Eight years later, in 2005, it received an update from Prime Minister Lee Hsien Loong who made a seminal point about education – Teach Less, Learn More.

Education leaders, he says, have to reflect on what this means for their students and how to go about implementing this new way of teaching. He likens the process of teaching and learning to feeding a child. When the child conscientiously gobbles up all the food given to him, there is no problem. But the issue arises when the child refuses to eat.



"What do we do when the child says *mai jiaq?*" he asks, using the Hokkien phrase for not wanting to eat. Instead of cooking different food or finding novel ways to feed the child, he says "we usually still try to shove the same food into the child. This means more of the same teaching that did not work. We are not trying to understand how to teach better."

The phrase 'Teach Less, Learn More', he points out, is all about inspiring educators to teach better so that students learn better. It is not as easy as it sounds, he acknowledges, as each student learns at a different pace and everyone has a different interest.

Technology does help some students learn better, but it is not the panacea that will solve every teaching problem, he says, giving the example of the microwave oven versus the traditional wood-fire oven. The microwave oven trumps the wood-fire oven in terms of technology, speed and convenience, he notes, adding: "The microwave oven is the best choice, in one minute, the food will be hot and ready to eat. But if you go to a restaurant for

a gourmet pizza, would you want one from the microwave oven or wood-fire oven?"

The focus should be to get back to the basics of pedagogy; it is not about the sophistication of the tool, he says. Technology can be used to enhance an existing pedagogy or enable a new and superior pedagogy. "The tool is important...but the tool will only be powerful in the hands of the chef," he says. "If you are not skillful, the food will not be good."

In fact, he adds, educators are more important than before in this digital age. "You cannot google-proof teaching, you still need teachers," he says with a smile. With all the overload of information and misinformation on the Internet, he maintains that teachers are needed to guide students to discern truths from untruths.

But because of the digital revolution and advancements in society where information is readily available to students, he adds: "Educators must up their game and be even more knowledgeable."

"The craze is now on e-learning," he notes, referring to how more students are now doing online learning through educational resources on the Internet. He, however, cautions about going overboard and allowing teachers to go extinct by having computers replace them. "One day, the craze may be the human teacher," he notes with a wry smile.

### INSPIRED EDUCATORS, INSPIRED STUDENTS

One key element in helping students learn better is how the education system is moving towards less emphasis on examinations. This makes learning less rigid and result-oriented, he says.

Instead, students are encouraged to learn because they want to and they can learn subjects and skills that interest them – something which educators should bear in mind, he adds, as they aim to develop creativity and critical thinking in schools. "We should make our education not just a life of tests. Examination results are not the only pathway...there needs to be more assessment of learning and celebrating success in various areas," he notes.

Educators, he adds, are beneficiaries of the system and they have a duty to ensure the future generation benefit from having a good education too. "Education is the human enterprise of paying it forward," he says.

The challenge, however, is that the environment has evolved. Now, a larger share of students comes from middle-income families as Singapore's economy has grown rapidly, lifting the incomes of many citizens. "We must help students not to take this (progress) for granted. They must have the resilience and gratitude to live in this time and age and continue to strive for progress," says Pak Tee.

Yet, as Singapore recently celebrated SG50 – marking 50 years of independence – last year (2015), the question that has been debated is whether the nation can survive till SG100. For educators, he says the answer is in their hands as they are responsible for educating the next generation who will be in charge of the country's future. "We are blessed in many ways. We still have a rather good economy and employment for many people. But that may not be true in the future," he notes.

The young today will have to grapple with many issues, including globalisation which brings greater competition from other countries and their citizens. They will have to be equipped with the skills and stomach to fight the competition, he notes. To do so, educators will have to get the foundations right.

"When I go to other developed countries, I see many tall towers and cathedral spires," he shares. "While we focus on what is visible, for every tall tower and cathedral spire, there are strong pillars underneath to support these structures. My advice to school leaders: Build down in order to build up."

He describes the job of educators to that of planting trees, using the Chinese proverb *qian ren zhong shu, hou ren cheng liang* which means the future generation benefits from the shade of the trees that were planted by their predecessors.

As for those who rise up to leadership positions, he says they should have "the skills of a CEO and the heart of a teacher". "If you want to lead teachers, you must think like a teacher. Don't just speak from the point of view of the management, think from the perspective of a teacher and communicate the message in a way that will excite them," he shares.

"Teachers look up to leaders not just for teaching expertise but educational philosophies too. This is a profession not of policies and results, not of machines and tools, but rather, a profession of purpose and principles, and of building people up."

## Examining Singapore: Why Assessment is Needed

Examinations have gotten a bad reputation in Singapore, laments Ms Tan Lay Choo, chief executive of the Singapore Examinations and Assessment Board (SEAB). “Examinations always comes across as the bad guy in our system, especially the high stakes part of it,” she says, referring to national examinations.

But remove examinations from schools, and the education system may not be as effective, she notes, explaining that the system is supported by three pillars – curriculum design and planning, teaching and learning, and assessment.

In a recent speech to principals and school teachers, Lay Choo likened these three pillars to the legs of a stool. “If one leg is shorter than the rest, the stool will be wobbly,” she shares during an interview in her Bukit Ho Swee office. The alignment of these three “legs” is what makes the Singapore education system successful, but “many do not appreciate what we have”, she adds.

Foreigners, however, appear to have noticed something special in the education system here. Curious, several overseas counterparts have asked her the secret to Singapore’s success in scoring well for PISA. The Programme for International Student Assessment (PISA) is a triennial international survey, which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. “These international tests validate what we have been doing in our education system,” she says, and that includes our examination system.

Lay Choo has helped the SEAB since 2008. It is a statutory board under MOE that is responsible for the design, development

and administration of national examinations in Singapore. Her appointment coincides with this period when Singapore is looking to shift its emphasis away from examinations amid growing complaints of the education system’s focus on academic results. This led to a review of the Primary School Leaving Examination (PSLE), announced in 2013.

In April (2016), Acting Education Minister Ng Chee Meng said the PSLE will have a new scoring system with wider bands. “The way we currently score the PSLE is too precise, and differentiates our students more finely than necessary. We should therefore, in time, move away from such fine distinctions, which are not meaningful, especially at that young age,” he said in Parliament. The Ministry of Education (MOE), he added, will take the next few years to develop and test the new exam and secondary school posting systems to ensure a fair and transparent system based on academic merit.

Mention PSLE and she smiles, saying it is the one question she hopes not to answer as there is an ongoing engagement process. But she did give her take on the controversial issue. “The PSLE T-score has been around for over 40 years; a decision cannot be made quickly. People also acknowledge that it is not bad or broken, even though there is an urgency to change,” she notes. “But going forward, what is a better system that is more aligned with what we want to achieve? If we are trying to de-emphasise or not pay so much attention to the PSLE, what kind of signals must we send out clearly?”

While policymakers grapple with these questions, she has her hands full trying to enhance other assessment methods.

*“The PSLE T-score has been around for over 40 years; a decision cannot be made quickly. People also acknowledge that it is not bad or broken, even though there is an urgency to change. But going forward, what is a better system that is more aligned with what we want to achieve? If we are trying to de-emphasise or not pay so much attention to the PSLE, what kind of signals must we send out clearly?”*

# TAN LAY CHOO

“I don’t like staff who just do but don’t know why. The teacher in me will come out to explain why this job must be done.”

## TWEAKING EXAMS

Examinations are being blamed for undue stress on students. She understands the concerns. “There are many ways to look at a child. Why should we only look at their test or exam results?” she shares, noting that each child has his or her own talents beyond academic grades.

Here, she points out that examinations and assessments are different. Major examinations take place once in four to six years, but assessments occur more frequently in schools to help teachers spot students who have difficulty in learning, she explains. The education system needs more of such ‘holistic assessment’ with the discovery of more tools to assess different parts of learning, she adds. This includes assessing what is currently not assessable such as creativity.

And while examinations are not going away, she says they are being tweaked so that they can measure what they ought to measure – students’ capabilities instead of their ‘incapabilities’. For instance, e-exams were introduced in 2013 for students who were weak in their mother tongue. The purpose, she explains, is to assess students differently using technology. “When it was an exam paper, some students handed in blank scripts other than writing their names,” she discloses, as they are simply unable to write anything down. But when it came to online examinations, most attempted to answer the questions such as composing an e-mail to their friends.

To Lay Choo, this showed that the students found it less daunting to answer questions online. For instance, for Chinese language, all students had to do was type the hanyu pinyin into the computer and the Chinese characters would pop up. This way, students who did not know how to write the words would not be penalised. “The e-exams also made the assessment more engaging, so many forgot that they were taking an exam,” she points out.

Starting this year (2016), Primary Five pupils are also tested differently for Mother Tongue oral examinations. Instead of staring at a picture on a paper, they will view a video and have a discussion with the examiner on what they watched. The intent is similar to e-exams, using technology, in this case a video, to make the test more engaging and help students give better answers while allowing them to demonstrate their best effort.

But she maintains that examinations must be “credible and fair”. “Students must be tested on what they have learnt and not what they have not learnt.” Her biggest test, perhaps, is to make students, parents and even educators see the continued relevance of examinations and assessments.



## A PASSION FOR NUMBERS

Apart from being an ambassador for examinations and assessment, Lay Choo is also an advocate for Mathematics. She gets upset whenever students, or even adults, tell her they are hopeless with numbers and hence, abysmal in Math. “Students who used to tell me that they can’t do Math – I will go after them. I don’t believe them,” insists the former Mathematics teacher.

She recalls her early teaching years at The Chinese High School when she helped a student who consistently failed Mathematics to eventually score a B3 in the ‘O’ levels. “What these students need are extra lessons, more motivation or encouragement to remove the psychological gap,” she reasons.

Her dogged determination to ensure students succeed has followed her entire career in education, spanning the whole spectrum of students from gifted to those with special needs, as well as a wide range of areas – teaching, curriculum planning and assessments.

Ask her what are the high and low points in her 35-year career, and she breaks into a wide smile. “I spotted this question,” quips the woman leading the agency that

sets Singapore’s national exams. “Every job that I have done contributes to who I am today. I’m fortunate to have this range of experience...and see education in various perspectives,” shares Lay Choo who is one year shy of retirement.

But she does have one regret: not spending enough time teaching in schools. “I’m a teacher at heart,” she says of the profession she decided to enter since secondary school. Her classmates had told her she had a knack for teaching, as many turned to her to teach them how to solve puzzling Math questions. Her passion with numbers and equations started then and she went on to major in Mathematics at the then University of Singapore.

But she had only seven years in school – her first three years (1981-1983) as a Mathematics teacher in The Chinese High School and Raffles Institution, and four years (1999-2002) as Principal of Bukit Panjang Government High School. The bulk of her career was at MOE’s headquarters. She spent 13 years planning the curriculum and development of the Gifted Education Programme (GEP), two years in manpower planning, a year as a Cluster Superintendent, four years in Psychological Assessment and Research and two years in Psychological Services.

## A LEARNING JOURNEY

In every posting, she had to deal with many unknowns and learnt new skills. In 1981, in her first posting to The Chinese High School, she had to teach the first cohort of students who converted from the Chinese to the English-language stream. She saw many bright students struggle with learning as they had to switch from learning their subjects in Chinese to learning them in English.

Most still managed to score top marks for all subjects, except English. She was the form teacher of a Secondary 3 student who failed English and according to school rules, would have to be detained and not promoted to the next level.

At the teachers’ meeting to discuss these cases, the principal looked around the table and asked which teacher was willing to guarantee that this particular student could pass English, and he would not be detained.

“I turned to the English teachers and tried to get them to say yes, but no one did. So in the end, I said I would guarantee the student would pass English,” she shares. She did not tell the student what happened during the meeting, but other teachers apparently did. “He did not disappoint me,” she says. To Lay Choo, it was unfair to retain this student as he was caught in the changes in education policies. He just needed more time.

Her next posting was to a totally new frontier – the GEP which began in 1984, the year she became a GEP officer in MOE. There, she covered every aspect of the Mathematics syllabus such as designing the curriculum, setting tests, training the teachers and communicating with parents. “It could be traumatic at times,” she discloses with some nostalgic reflection. “The students are gifted but I’m not gifted. I had giftedness thrust on me.”

“Sometimes, they shock you with some answers and you are not sure if it’s right. One student even claimed to have solved a problem that was supposedly unsolvable,” she says, adding she had to check some answers with university professors. That particular student was wrong, but it obviously gave her such a headache that she remembers the incident till today.

In the middle of her posting, in 1989, she pursued her Masters in Education Evaluation and Research at the University of California, Los Angeles. “I decided to study something generic as I thought I won’t be at the gifted programme forever,” she says. But when she went back to Singapore, she returned to her old role in the GEP, to further design and evaluate the programme.

In 1997, she moved to Manpower Planning as Assistant Director, a new role created for Lay Choo. Initially, she felt like it was a ‘detour’ in her career. But in her two



years at the personnel division, she was able to study the trend of teacher recruitment and retention, and work out a better teacher evaluation system. “What dawned on me was the profile of teachers we had. It meant we were in deep trouble. There were many old and young teachers, but not enough teachers in between,” she says.

“We were recruiting only enough to replace when we should be recruiting more than what we needed, as it takes time to train teachers.” So she pushed to hire more teachers, leading to the great teacher recruitment in the late 1990s to early 2000s. Lay Choo quickly moved on to her next role in 1999, as Principal of Bukit Panjang Government High School, which some say is the “RI of the West”, she shares. “It was the highlight of my career, as it went back to my original intent of teaching,” she notes, even if she was in a management and not teaching role. “At the HQ, you can influence indirectly through policies but you do not feel the immediate impact on students. In the school, you get immediate gratification.”

She was the school’s eighth principal, but the first female and first English-educated principal, which caused some concerns. “They had a lot of doubts about me. Would I change the school culture?” she explains of the school which was mainly Chinese-speaking. She was not there to change anything, and quickly put her rusty Mandarin to good use. Her first speech to the school was in English and Mandarin, and she also conducted the meeting with the School Advisory Committee in Mandarin. “My Mandarin was at its best during that period,” she says.

It was also the first time in a long while that Lay Choo had to deal with different types of students other than those in GEP. The school had all three different streams – Express, Normal and Normal Technical. But after four years, she was moving again – back to HQ as Superintendent in East Zone overseeing 12 schools in that area.

It was 2003, and her first task as Superintendent was to manage the outbreak of Severe Acute Respiratory Syndrome (Sars) that caused a national crisis. “We were getting reports on the number of students who showed symptoms. We were doing our best to guard the schools to ensure Sars did not get in, while trying to understand what this disease was all about,” she recalls.

When the crisis was over, she had to learn a new set of skills for her main task –



how to work with principals who are leaders with distinctive styles and ideas. Her *modus operandi*, she shares, was to “advise and add value, but not to intrude or interfere”.

After a year, she was posted to a new area as Deputy Director of Psychological Assessment and Research. The work involved a system-wide evaluation of learning support programmes for students, especially those weak in language or maths. Pupils were tested as they entered Primary One in English and Maths, she shares.

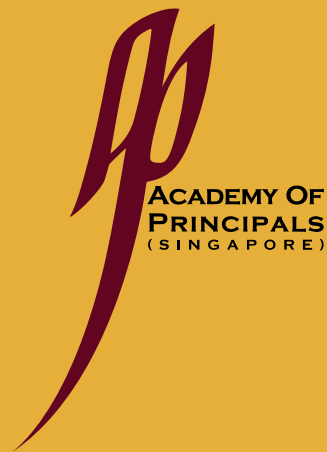
Two years later, she was concurrently appointed as Deputy Director of Psychological Services which caters to students with special needs. “I was happy to be there as it completed the range of students that I have worked with,” she notes.

At that time, there were no additional resources for students with special needs and teachers were not trained to deal with such students too. “I fought for more resources, looked into training and development of teachers, and started to read psychological reports,” she says. So much so that “some people even asked, are you a psychologist”, to which she replied “no”. But it showed her dedication to her craft.

Her final stop is at SEAB, which she views as “completing a cycle” in her career, going from teaching, curriculum planning, human resources, psychological services and now assessments. But at every step of the way, she never stopped being a teacher.

“I joined the service as a teacher,” she says. Despite the different roles over the years, “I’m still teaching, communicating and explaining things to people in an effort to make things clearer to them.”

**LEADING  
LEARNING**



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