

Singapore

HO PENG, *Director-General of Education, Ministry of Education*: Teachers are extremely, extremely committed in Singapore. The teachers I speak with really want the best for their kids. There's a deep sense of pride, there's a deep sense of commitment, and so education is seen as a means to build a nation.

TITLE: Strong Performers and Successful Reformers in Education: Singapore

HO PENG: I would think that we take education very seriously because we are really a very small country- a very small country with no natural resources. Therefore, education to us, since independence, has always been a means by which you could forge a national identity- have Singaporeans come together as one. It is also a means by which we could ensure that in terms of our own economy that we could make some headway and that the economy could do well.

PROFESSOR DAVID HOGAN, *Principal Research Scientist, National Institute of Education*: The ministry and the government more broadly have emphasized Singapore as a global city, and have emphasized that its future lies in staying and developing as a global city. The role of teaching and education more broadly continues to get reemphasized by the government. So, over the last 12 or 13 years, there have been a series of policy announcements by the government that have really emphasized the critical role that education plays in nation building.

PROFESSOR CHRISTINE LEE, *Head, Curriculum, Teaching and Learning, National Institute of Education*: We deeply believe that the teacher is a key in bringing about changes. We can have all kinds of reforms. At the end of the day, it's the teacher that has to deliver that in the classroom, and that will make a real difference to the learning of the pupils they get in touch with every day.

HENG SWEE KEAT, *Minister for Education*: From the very early years of our independence, the country was very poor, and... but yet we had to quickly educate a very large number of young people. So, what we did was to have a very centralized, efficient system to build up the education system very quickly. Some schools are built in cookie-cutter style; teachers are recruited in huge numbers all in one goal. And after we solved that problem, the next stage was to raise education attainments.

HO PENG: That was a very important phase in our development because it really focused on the craft of teaching and learning.

TEACHER: *Okay so same thing, we will have, uh, two students for every terminal. If you have any issues with the terminals, raise your hand and I will come to you. Okay? Let's go.*

HENG SWEE KEAT: I think our basic belief is that no education system can be better than the quality of its educators. And so, we place great emphasis on recruiting the

right teachers. We start with fairly academic standards that our teachers are recruited from the top 1/3 of every core of students. And from that top 1/3, they go through a series of tests and interviews to ensure that we recruit teachers who are passionate about teaching, who cares about students. Then they go through rigorous training at the National Institute of Education.

TEXT SLIDE: The National Institute of Education (NIE) is Singapore's national teacher training institute. The Ministry of Education recruits prospective teachers and sends them to the NIE for training. Once they have complete their course, they are deployed in schools where they get further support from experience teachers as mentors.

PROFESSOR TAN OON SENG, *Dean of Teacher Education, National Institute of Education*: Let me describe the philosophy behind our curriculum. First of all, we prepare a teacher to be first a teacher of the learner, number one. And number two, to be a good teacher of the subject. So, the essential foundation is that a good teacher must, first of all, be very passionate and clear about how to help people learn, and how people learn best.

TEACHER: *Okay, the challenge for the ??, say ten minutes, is this: if you had to do a made in Singapore movie, about an inspirational Singapore teacher movie, set in say, a neighborhood school, what would this teacher look like and how would you film it. Okay? I've got markers here...*

PROFESSOR LEE SING KONG, *Director, National Institute of Education*: We have few rules to fulfill in this whole education system. And at first we prepare. All the new teachers that our education system meets annually, and on an annual basis we graduate some 2,000 new teachers for the school system. And secondly, we have 31,000 teachers in the education system, and our policy makers rightly identify that the professional development of the 31,000 teachers in the school is as equally important as that of preparing new teachers.

TEACHER: *What are the key factors in this test? I think that if you ask a question this way that the students will just plop the answers on the paper. So how can we put this question into a Socratic questioning and which type of Socratic questioning would you use?*

HO PENG: I think we are a deep believer of lifelong learning. At the pre-service level, we cannot teach our beginning teachers everything- what it means to be a good teacher. We have to encourage our beginning teachers to come by and be involved with continual learning and in-service courses, and there's plenty of professional development opportunities for them, and I think that access and the support is, I think, an envy of many countries.

PROFESSOR LEE SING KONG: That is quite a systematic approach towards developing teachers who are already in the schools. In fact, the ministry supports

this professional development of teachers, and recognizes its importance by allowing every teacher to have an entitlement of 100 hours of professional development time to help her or him to become a better teacher.

TEXT SLIDE: In 2009, the Ministry of Education introduced the concept of Professional Learning Communities, or PLC, to Singapore's schools. PLCs provide a forum where teachers share and learn from each other with the specific intent of enhancing student learning.

TEXT SLIDE: To date, 271 schools have created PLCs. Thanks to continuous dialogue and feedback, teachers improve their classroom skills and stay up to date with professional practice.

TEACHER: *Today we are looking at how we can enter the scaffold student learning through the use of Socratic questions and we're going to look at picture discussion, okay? Um, maybe before we even look at the questions, what do you think are some of the concerns of learning outcomes that you want to see in your students, what are the problems you face?*

ADRIAN LIM, *Principal, Ngee Ann Secondary School*: We believe very strongly that we must have a professional learning community. You know, that's "PLC" and right in the middle of this three-letter word, "L", "learning." So, teachers must learn, and I think with the kind of knowledge economy that has emerged, you have new knowledge created every day. And I think the teachers must keep up with the content, and also development in new pedagogy. So, if the teachers do not keep on learning, they will find that it is going to be very difficult to engage the kids of today, who are exposed to a lot of information via the internet and social media. The day they stop learning is the day where they will not be able to engage their kids effectively.

STUDENT TEACHER: *I think it would be best to ask questions to allow them to probe deeper into the picture...*

TEACHER: *Are you suggesting that we look at observation...*

STUDENT TEACHER: *Interpretation, influences... yeah...*

ADRIAN LIM: To do that, really, we get teachers to work together, to collaborate, and to look at each other's practice in the classroom. I think it is essential and really very critical, because the good teaching practices should not reside within the four walls and be kept to one teacher, and I think there is a lot of sharing that we can have in this school.

TEACHER: *What you want to do right now is, okay, think of the Socratic questions, what do I want to use to further the find, clarified. Now, okay, I will go on the internet, I will find any form of evidence that will help support this statement*

MUNEIRA DAUD, *Head of English Language and Literature Dept., Ngee Ann Secondary School*: Professional Learning Community in schools was started basically to ensure that teachers had a platform to develop their teaching practices. Our main focus, actually, is to make sure that students learn best, and in order to do that we have to collaborate. We exchange ideas; we... we try out, we tests. And eventually we check for results. And the intention, really, is to share ideas, to make it better for the students.

TEXT SLIDE: Ngee Ann Secondary School is a Future School. These schools encourage innovation and enterprise in teaching practice, and flexible learning environments with a special emphasis on the use of technology and digital media.

PLC TEACHER: We are in the process of watching a model lesson that's being run by my colleague here, and the whole process of us watching the lesson is to gain some kind of points from her lesson, and also to provide our feedback. We discuss it to come up with a better lesson because definitely learning goes with sharing and communication, and there's definitely in scope for improvement for any lesson.

TEACHER: *What do you understand National Service to be, when you think about it, what comes to mind? (STUDENT RESPONDS)*

MUNEIRA DAUD: There's always something new to learn. You're never at a standstill. You're always moving ahead, pushing boundaries, trying to discover new things, new ways of teaching. So, it's exciting because you don't get caught in a rut. Even if a pedagogy is sound, there's always a technology that's always challenging us, and we always have to find new ways to connect with the kids and to challenge them.

TEACHER: *This is the question, philosophy defines the rate of change of the sense of time, is it true? So I want you to tweet me answers, this is how you tweet, this is the format you need to tweet. So you put "at sign vote by tweet 1".*

PROFESSOR LEE SING KONG: In the early 1990s, the teachers really are the monopoly of knowledge, and they are the one that comes to class to deliver that knowledge so that the students can acquire them. But today, knowledge is no more a monopoly among the teachers, because students can get knowledge from a myriad of sources, and hence the role of the teacher today... yes, there is still a component of knowledge imparting, but there is also a very large component of facilitation, that may facilitate students where they could get the right knowledge, how they could synthesize things, how they could discern the information that they get.

TEACHER: *Energy cannot be created or destroyed, okay what principle is this? Principal of conservation of energy, ok good.*

ADRIAN LIM: So, we look at technology very meaningfully, and we see how can we leverage this technology to make a very significant impact in the classroom instruction? I'll give you an example. In a classroom of 40, it is really impossible to get 40 students to ask 40 questions at one goal. When we use the instant messaging tool, we open 40 windows to 40 kids. They could ask 40 questions at the same time, and the teacher could see they are thinking on the technology tool that they use, and the kids get more excited because they are using the tools that they are very, very good in using, not just a pen and a pencil.

TEACHER: *Everything consolidated on one PowerPoint slide. Use the main thing as a skeleton, then you add on to the different parts. Okay?*

ADRIAN LIM: A lot of our younger teachers are coming in. They're a lot more savvy in the use of information, communication, technology tools. And I see them teaching the more senior teachers how to use those tools effectively.

ASHIKIN ABU, *Biology Teacher, Ngee Ann Secondary School*: *I think this is what you want to encourage, in a class you want to encourage a student to think for themselves. Yeah, correct? If you do not know the answer, it's okay...*

CAROLYN KHOO, *Biology and Chemistry Teacher, Ngee Ann Secondary School*: *Yeah it's okay, I'll just be honest: we are here to learn together.*

ASHIKIN ABU: *Correct. So I really think this research that you have done, really prepare yourself better in the classroom...*

ADRIAN LIM: Within a department, we also assign mentors to teachers. So, new teachers come in. They are not left alone. They will be mentored by very experienced teachers who have taught for more than at least five years. It's sort of like an apprentice kind of relationship where a more senior teacher guides a young teacher in the profession.

CAROLYN KHOO: *Give them the different categories to work on, the number of petals, the type of roots. If you guide them with categories, they are able to differentiate into the two types of species of monocotyledon and dicotyledons.*

CAROLYN KHOO: I think there are many benefits of the mentoring program. Firstly is the relationship I have built with my mentor. In terms of teaching pedagogues, what I used to do would be, I... I just teach. I just go through the content and just make sure... chuck it on the students and make sure, "This is the content; you receive it." But after different sessions with my mentor, Madame Ashikin, I actually learned that it is important to question, and not just question- you have to wait for... give time for answering.

MENTOR TEACHER: *Yeah, so I think this is really well done. Perhaps, I just wanted to suggest to you...*

ASHIKIN ABU: I believe that her learning, my learning, begin with questioning each other... each other's approaches; why do we do this and that? And I think from there, if we are earnest enough to listen, to give time to one another, that is where we both benefit. I truly feel that way.

TEACHER: *Can you hear us clearly?*

TEACHERS ON SCREEN: *Yes. Can you hear us alright?*

GROUP OF TEACHERS: *Yes, alright. Okay first of all, I understand that the purpose of this Skype session, we want to confer the suitability of the pretest. This common agenda that we have...*

TEACHERS ON SCREEN: *Yes, common agenda. Yeah, that's right.*

ADRIAN LIM: I would say that the teachers in this school, myself included, we... we scan the globe for best practices.

TEACHERS ON SCREEN: *One thing we can maybe think about is if we give it to the children, some of them might actually come up with the idea of the steepness of the slope. They might actually be able to start accessing the understanding of different gradings and change.*

ADRIAN LIM: In fact, I would say that the teachers here are very curious, and they are always on the lookout for what is the best way to deliver that content to the students.

PROFESSOR TAN OON SENG: Teaching is not a job. You are here for a calling. And because it is a calling, it can only be fulfilled if you have a passion for it.

TEXT SLIDE: When Singapore attained statehood in 1965, most of its two million people were illiterate and unskilled. The government moved fast to raise education standards. By the early 1970s all children had access to lower secondary education.

TEXT SLIDE: In 2009, Singapore participated for the first time in PISA. Its students scored an average 526 points in reading, putting Singapore in the top eight performers.

TEXT SLIDE: In math, they scored an average 562 points, surpassed only by students in Shanghai, China. And in science, they scored 542 points, putting Singapore in the top four.

PROFESSOR DAVID HOGAN: If you look at the status rankings of teachers in Singapore, they are accorded enormous social status by the community at large. So,

they are right up there with doctors, lawyers, judges. 'Cause essentially, teaching is a really important professional role that they play in the community.

HO PENG: We meet with schools and teachers very often. Every director here... In fact, we visit school at least 12 times a year. And so, I went to school just yesterday. And you actually hear the teachers... you hear the teachers and you know really that what are some of the issues on the ground, what are some of the ground concerns, what do we need to do to support them better? Teachers are your most precious resource, and so I think developing teachers is one of the things that we pay a great deal of attention to, and that's what I look forward to.