

Perspectives in Motivating Educators and Learners

A Report of the NIE TE²¹ Roundtable Discussion
22 January 2010



Organised by:
Motivation in Education Research Lab (MERL)
National Institute of Education, Singapore

Supported by:
Asia-Pacific Education Research Association (APERA)



Cover design and layout by Stephane Cheung.

Perspectives in Motivating Educators and Learners

A Report of the NIE TE²¹ Roundtable Discussion
22 January 2010

Prepared by:

A/Prof Low Ee Ling

Ms Jennifer Joseph

Ms Joy Camille Atienza

From L- R: Prof Paul Teng, Prof Lee Sing Kong, Ms Sum Chee Wah, Prof Edward Deci, Prof Richard Ryan, Prof Tan Oon Seng



Contents

I	Meeting the Challenges of the 21 st Century: Implications for Teacher Education and Development	2
II	About the TE ²¹ Roundtable Discussants and Moderator	4
III	Teacher Education in the 21 st Century: Key Issues and Challenges	7
IV	Motivating Learners in the 21 st Century	10
V	Building Values, Ethics and Professionalism in 21 st Century Teachers	14
VI	Challenges in Teacher Professional Development in the 21 st Century	17
VII	Motivating Educators in the 21 st Century	19

Meeting the Challenges of the 21st Century: Implications for Teacher Education and Development

An Introduction

From November 2008 to June 2009, the National Institute of Education (NIE) embarked on a Programme Review and Enhancement (PRE) initiative, with the view of strengthening and enhancing our teacher education model. This strategic effort covering the whole continuum from initial teacher preparation (ITP) through to teacher professional development (TPD) was a response to the changing local and international education landscape. In particular, attention was paid to the implications of the latest initiatives by the Ministry of Education (MOE), such as mp3, PERI, C2015, TLLM and DOE on our programmes.¹ Bearing in mind the context of globalisation and rapid technological advancements, the PRE's taskforces sought to explore and determine the quality, relevance, and responsiveness of our teacher education programmes in the task of preparing and equipping teachers (both aspiring and serving) with the broad array of values, skills and dispositions necessary to function effectively in the 21st century classroom.

To achieve this objective, the PRE taskforces looked into five significant areas of teacher education: holistic education, theory-practice linkage, new and effective pedagogies, assessment and evaluation, and the ITP- TPD continuum.

The outcome of the PRE journey was a report entitled "A Teacher Education Model for the 21st Century (TE²¹)". Drawing from local and international research, best practices, findings from stakeholder focus groups, and inputs from MOE, the report presented six key recommendations that were deemed to be significantly instrumental in enhancing the delivery of teacher education at NIE, with the vision of building a stronger teaching force. The enhancements to the existing model encompass the entire ITP-TPD continuum, and focus on key areas of a values-based philosophy of teacher education with clearly defined outcomes in the form of expected competencies of graduand teachers, a strong theory-practice nexus, new pedagogies, programme, curriculum and assessment refinements and

¹ Masterplan 3, Primary Education Review and Implementation, Curriculum 2015, Teach Less Learn More and Desired Outcomes of Education are some of the initiatives of MOE in the past 5 years. More information can be found in the MOE website.

accelerated academic pathways. The refreshed and updated NIE teacher education model puts the 21st century learner at the heart of our teacher education goals.

Following the PRE and publication of the report, NIE is now embarking on realising the TE²¹ model. The implementation programme aims to ensure that all critical initiatives arising from the recommendations will lead to a genuine transformation in terms of what we teach, how we teach and how we assess. During this journey, NIE will continue tap on the counsel of experts in various fields, draw ideas from the best of minds and provide opportunities for robust academic dialogue to critique and refine the TE²¹ recommendations, therefore constantly advancing our educational practice.

On 22 January 2010, NIE held a TE²¹ Roundtable Discussion on the theme “Meeting the Challenges of the 21st Century: Implications for Teacher Education and Development”. Two renowned experts on motivation from the University of Rochester in the United States, Professor Edward Deci and Professor Richard Ryan, creators of the Self-Determination Theory and consultants for the newly-established NIE Motivation in Education Research Laboratory (MERL) led the dialogue on the key motivational challenges related to building values in students, teachers and teacher educators, as well as raising teacher professionalism in the new 21st century educational landscape.

The exact titles and order of presentation were as follows:

- Speaker 1: Professor Lee Sing Kong
Teacher Education in the 21st Century: Key Issues and Challenges
- Speaker 2: Professor Edward Deci
Motivating Learners in the 21st Century
- Speaker 3: Ms Sum Chee Wah
Building Values, Ethics and Professionalism in 21st Century Teachers
- Speaker 4: Professor Paul Teng
Challenges in Teacher Professional Development in the 21st Century
- Speaker 5: Professor Richard Ryan
Motivating Educators in the 21st Century
- Moderator: Professor Tan Oon Seng

About the TE²¹ Roundtable

Discussants and Moderator

Panel of Discussants (in alphabetical order)

Professor Edward Deci

*Gowen Professor in Social Sciences
University of Rochester*

Professor Edward Deci is one of the originators of the now widely adopted Self-Determination Theory (SDT). He is a professor of psychology and Gowen Professor in the Social Sciences at the University of Rochester, where he is a member of the Human Motivation Program in the Department of Psychology. He holds a Ph.D. in psychology from Carnegie-Mellon University, studied at the University of Pennsylvania (Wharton School), the University of London (London School of Economics), and Hamilton College. He was an interdisciplinary post-doctoral fellow at Stanford University.

For over 40 years, Professor Deci has been engaged in a programme of research on human motivation that has led to and been organized by the Self-Determination Theory. His research interests include a variety of issues in human motivation, isolating basic processes and testing their application to education, health care, parenting, mental health, and work organizations in the US and across cultures. Using laboratory and field methods, his work focuses primarily on the nature and development of self-determination.

He has an extensive list of publications, and is an accomplished researcher who has garnered an illustrious list of grants from numerous

institutions, such as a US\$6million grant from the Institute of Education Sciences, to examine the effectiveness of scaling up the first-things-first approach to comprehensive school reform. He does consultative work for corporations, public school systems, mental health agencies, universities, and governmental bureaus throughout the United States, and all over the world. He also has a private practice in psychotherapy.

Professor Lee Sing Kong

*Director
National Institute of Education, Singapore*

Professor Lee Sing Kong was appointed Director, NIE in 2006. He is Professor of Biological Sciences at the Nanyang Technological University and is a horticulturist by training. He obtained a 1st Class Honours in Horticultural Science from the University of Canterbury, New Zealand in 1974, supported by the Colombo Plan Scholarship and awarded by the Public Service Commission of Singapore. He received his PhD in 1985 from the National University of Singapore in Plant Biotechnology.

After an illustrious career in the civil service including stints in Ngee Ann Polytechnic and Parks and Recreation, Prof Lee joined NIE in 1991 and was in various positions of leadership. Prof Lee has launched many key initiatives that has greatly impacted Teacher Education in Singapore and internationally. He led in the articulation of the 3:3:3 Roadmap which outlines NIE's strategic

directions from 2007-2012 which will guide NIE to achieve her vision of becoming An Institute of Distinction. In 2007, he served as the inaugural chair of the International Alliance of Leading Education Institutes, putting NIE firmly in the global league of Teacher Education providers. He strongly advocates NIE's Teacher Education Model for the 21st Century (TE21) and is working closely with the NIE academe for its implementation. A true educator and scientist at heart, Prof Lee sees a quality teaching force as the key that can improve student learning outcomes, a view shared by other world renowned educators.

Professor Richard M. Ryan

*Professor of Psychology, Psychiatry and Education
University of Rochester*

Professor Richard M. Ryan is the co-founder of the Self-Determination Theory. He is a clinical psychologist and Professor of Psychology, Psychiatry, and Education at the University of Rochester. Professor Ryan graduated magna cum laude from the University of Connecticut, Storrs, CT, with a BA in Philosophy, and obtained his PhD in clinical psychology from the University of Rochester. He has published well over 200 scholarly articles and chapters in the areas of human motivation, personality development, and applied psychology. In addition to basic research on motivational processes, Professor Ryan studies health psychology, sports and exercise psychology, educational psychology, organizational psychology and psychotherapy.

He is currently the Editor-in-Chief of 'Motivation & Emotion', and his current research interests include: the acquisition and impact of materialism and other extrinsic goals in human development and culture; facilitation versus undermining of intrinsic motivation and self-determination; the determinants of subjective vitality and "energy"; and the sources of within-person variability in attachment, well-being, and life satisfaction. Additionally, he is also involved in applied motivational research in the domains of health care, education, sport, religion, work, psychotherapy and virtual environments.

He is a two-time winner of the Phi Delta Kappa award for research contribution in education, an accomplished researcher, and a recipient of numerous grants and has given addresses in over 50 universities around the globe. He has been a visiting scientist at the Max Planck Institute for Development and Education in Berlin, Germany, a James McKeen Cattell fellow, and a former director of clinical training in psychology at the University of Rochester.

Ms Sum Chee Wah

*Director, Education Programmes
Ministry of Education*

Ms Sum Chee Wah started her career in education as a Chemistry and Biology Teacher at Teck Whye Secondary school from 1981 to 1986. She later served as the Vice-Principal of Boon Lay Secondary School (1988-1989), Raffles Girls School (1990) and Swiss Cottage Secondary School (1991-1992). From 1993 to 1995, she was the Principal at Choa Chu Kang Secondary School before moving to become a Senior Inspector of Schools in 1996. Also included in her administrative career is becoming the Assistant Director for the Schools Division of MOE in 1998 and Deputy Director for Schools in 2000.

In her capacity as the current Director of Education Programmes at MOE, she is responsible for planning, developing, implementing, monitoring and evaluating programmes in three broad areas: i.) Character development, ii) programmes for children at the 2 ends of the ability spectrum, and iii) pre-school education. The first involves co-curricular activities, pastoral care and career guidance, as well as social and emotional learning. The second caters to gifted and talented students and specialised programmes for children with special needs.

Professor Paul Teng

*Dean, Graduate Programmes and Research
National Institute of Education, Singapore*

Professor Paul Teng assumed the position of Dean, Graduate Programmes and Research in 2006. Prior to this he served as Head, Natural Sciences and Science Education (NSSE) Academic

Group from 2004 to 2006. He is a Professor of Biological Sciences of Nanyang Technological University since 2004.

Prof Teng received his PhD from the University of Canterbury, New Zealand in 1978. He pursued his Bachelor of Agricultural Science at Lincoln College, University of Canterbury and in 1973, graduated with First Class Honours. He did post-doctoral work at the Agricultural University, Wageningen, The Netherlands under a Visiting Fellowship awarded by the Netherlands Government. Prof Teng has attended many short courses on management development and science communication.

Prof Teng has extensively researched the role of plant diseases in causing epidemics and crop losses in several continents, working cooperatively with a network of national programme scientists. The work has led to over 250 journal papers, eight books and numerous conference papers, and recognition by peer organisations. His pioneering work on using system analysis and computer modelling techniques to quantify and predict biological phenomena, and conduct risk assessments, is still having impact today in the USA and Asian rice growing countries. More recently, he has devoted his time to researching science communication and science entrepreneurship, under the umbrella of "Innovation and Enterprise" and to meet the needs of new economies. He is a regular invited speaker on agricultural biotechnology - how to bring products from "lab to consumer" and how to communicate on controversial issues surrounding biotechnology and other emergent technologies.

Moderator

Professor Tan Oon Seng

Dean, Foundation Programmes

National Institute of Education, Singapore

Professor Tan Oon Seng oversees all initial teacher preparation programmes at NIE in his capacity as Dean, Foundation Programmes, a position he assumed in 2008. He has been instrumental in innovating the core educational psychology modules by introducing problem-based learning

(PBL), and has also been actively involved in curriculum review initiatives as co-chair of the Postgraduate Diploma in Education taskforce (2004 to 2005), and as co-chair of education studies taskforce (2004 to 2005). He represented NIE at the Ministry of Education's (MOE) Corporate Planning Team (2004), and was a member of MOE steering committee for Social Emotional Learning (2005), and a sub-committee member of the "Teach Less, Learn More" for curriculum.

Professor Tan received his BSc and MEd from the National University of Singapore (NUS) and PhD from NTU. He attended the Stanford-NUS Management Development Program in 1998 and the Harvard Management Development Program in 2004. He has been Fellow of the Staff and Educational Development Association (UK) since 1995.

Professor Tan's areas of research include cognitive psychology and PBL. He is the main co-author of *Educational Psychology: A Researcher-Practitioner Approach (Asian Edition)*, a worldwide university textbook and reference. He wrote *Problem-based Learning Innovation: Using Problems to Power Learning in the 21st Century*. He is also editor of the international collections entitled *Enhancing Thinking through Problem-based Learning* and *Problem-based Learning in E-learning Breakthroughs*.

Professor Tan is concurrently Editor-in-Chief of the journal *Educational Research for Policy and Practice* and the President of the Asia-Pacific Educational Research Association. He has been a board member and reviewer of many international journals based in the UK, USA, Australia and Asia. He has been guest editor of the journal *Innovations in Education and Teaching International* for the special issue on PBL. He is the advisory editor for the *Asia-Pacific Education Review*. He is also an international advisor for *New Horizons in Education*. He was also a member of the Board of Reviewers for the *Journal of Problem-based Learning*.

Teacher Education in the 21st Century: Key Issues and Challenges

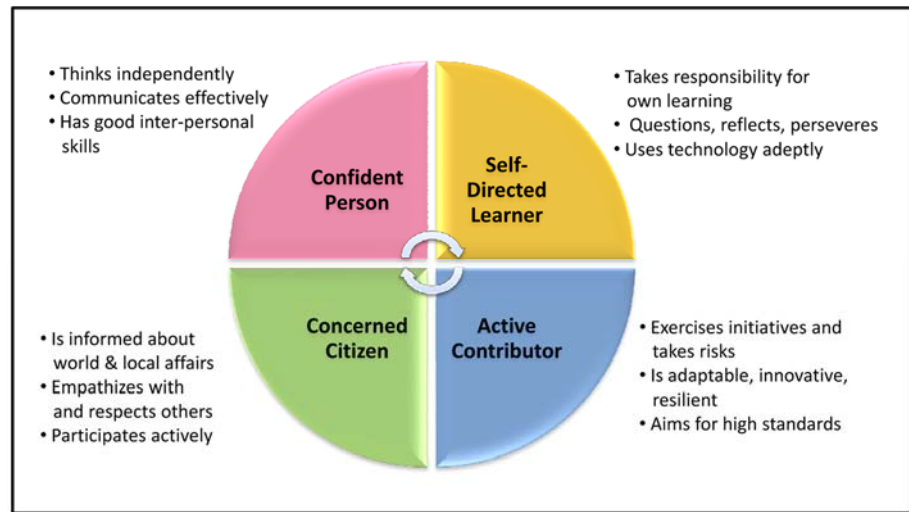
School learning environments have changed dramatically in the last decade. Classrooms are no longer just a locus for teachers to supply information to students. They have become places where teaching and learning interact to generate new knowledge. Today's classrooms leverage both on new ways of using traditional tools, as well as IT to advance the learning of students. Aside from just computers, the use of interactive whiteboards, smart boards and other forms of interactive digital media have become common. For example, during a zoo excursion, students from a primary school used the latest smart phones to shoot photographs of animals in their habitats, after which they completed digital worksheets by keying their answers into the device. ²

What has also significantly changed is the amount of information that students now bring in on their own to the classroom. With the ubiquity of computers and the internet, students have exceptionally fast access to information. According to a survey conducted by research firm Saffron Hill in mid-2009, Singapore children spend about 18 hours weekly online aside from using the computer for educationally-related purposes. Children as young as aged four are competent with computer technology. Even with new gadgets being introduced successively in the market, students are able to adapt well to it with minimal effort. ³

Professor Lee Sing Kong calls these technology-savvy youth of our time “digital natives”. They represent the new profile of students in the 21st century. Against the backdrop of globalisation, there are different educational needs in the form of skill sets and developmental areas that our education systems would need to develop to cater to the profile of these students. MOE has framed these areas under their Desired Outcomes for Students. (Figure 1)

² Luo, S. (2009, Aug 8). iPhone as tool for school outings. The Straits Times, p3.

³ Luo, S. (2009, June 5). Kids online: parents still clueless. The Straits Times, pC7.

Figure 1:*

**This figure is an NIE rendition of the Desired Outcomes of Education*

While the internet and other new media function to support student learning, they may also arguably impede students' ability to achieve the desired outcomes. The challenge of motivating the learner in a new learning environment remains one of the more pressing issues in teacher education today. We need to consider the following questions:

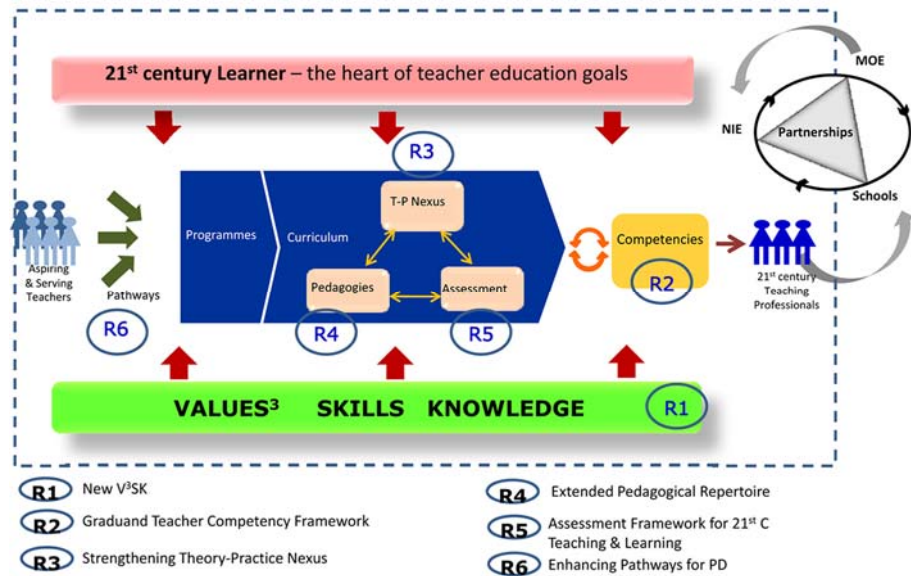
- What are the pedagogical strategies that are relevant in today's digitized world?
- What are the pedagogical strategies relevant in today's culturally diverse learning environment?
- To prepare for the knowledge economy, how do we motivate our students to acquire the necessary knowledge and competencies whilst being deeply rooted in their national identity, culture and values?

Achieving the desired learner outcomes must be central to any teacher education system. With the quality of teachers being the most influential determining factor in the quality of education systems, teachers must be developed to deal with new literacies, learning environments and curricula. Based on MOE's C2015 document, students must become confident persons, self-directed learners, concerned citizens and active contributors. Our school system must therefore nurture the whole child morally, intellectually, physically, socially and aesthetically. These outcomes demand a new generation of teachers who are able to motivate our children towards achieving these goals.

In recognising this reality in our own Singapore education landscape, NIE's response is a Teacher Education Model for the 21st Century (Figure 2) along with six key recommendations, which is aimed at equipping our teaching force to meet the challenges

of the 21st century classroom, and more specifically, the new desired outcomes of education in Singapore.

Figure 2:



TE²¹ recognises that *21st century learners call for 21st century teachers*. Teachers must be motivated so that they can fulfill their roles in the classroom. One of the main challenges of teacher education would be how to motivate teachers to be reflective practitioners and to possess the requisite values and to acquire the necessary knowledge and skill sets to truly make a difference in student learning.

TE²¹ also believes that *21st century teachers call for 21st century teacher educators*. NIE faculty must be able to model innovative and effective pedagogies and practices which will be adopted by teachers in the schools. The challenge for us now is how to motivate our academics to take a serious world view of the 21st century changes and challenges, and to respond appropriately in preparing teachers for the 21st century classroom.

Motivating Learners in the 21st Century

Prof Edward Deci asserts that in the 21st century context, the important questions to ask about education at any level, from pre-school, post-graduate to adult learning are:

- What do students need in order to be active, engaged lifelong learners?
- What are the basic needs of all students and how do we satisfy these needs?

Deci and Ryan's Self-Determination Theory (SDT) states that students need three things:

1. **Autonomy: to have a sense of choice, volition and autonomy**
 - Students should be supported so that the motivation inherently within them will be the basis for their learning activities.
2. **Competence: to feel effective**
 - Students feel that they are able to master the situation and thus develop confidence.
3. **Relatedness: to be able to relate with other people within the learning Environment**
 - Students must develop personal contacts and relationship with others, including their teachers, in order to be engaged learners.

Figure 3:

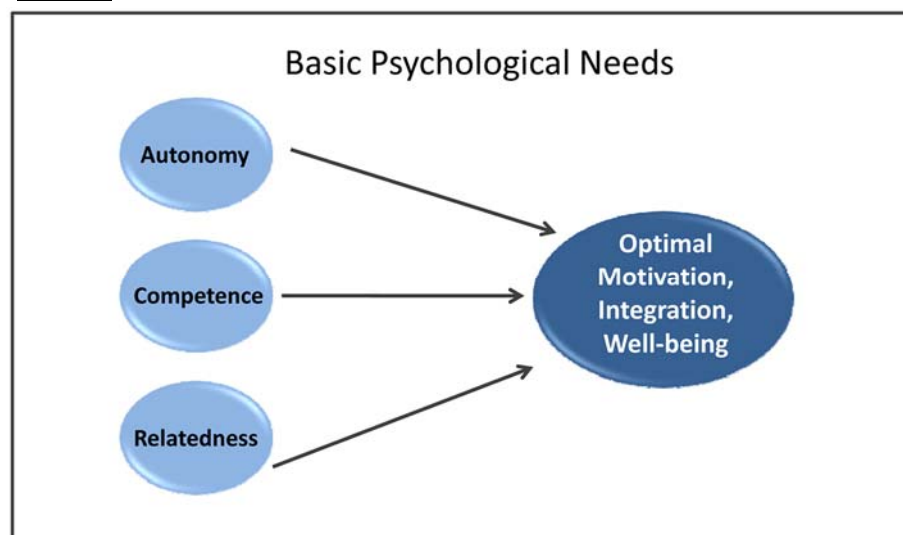
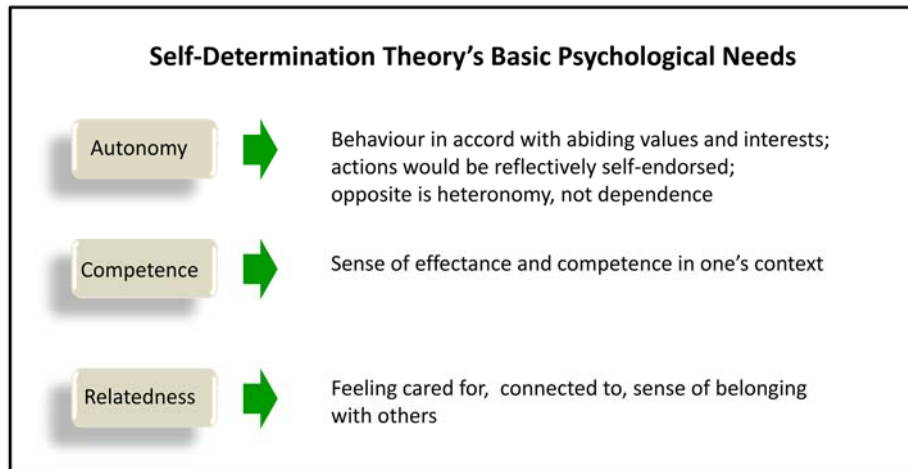


Figure 4:



The Singapore government has in recent years provided a more diverse academic pathway hence opening up more choices for the 21st century learner. The provision of multiple academic pathways for learning through the establishment of new education institutes from secondary to tertiary levels gives our youth the opportunity to deepen their learning.

There has been an ongoing diversification of the school system, which has been in play since 1997 in a conscious attempt to move away from the 'one-size-fits-all' framework. The objective is to cater to differentiated learners who may require different approaches to help them realise their full potential academically or otherwise. The evidence for such divergence is seen through the establishment of different types of schools – independent, international, government-aided and specialist schools. There is also an ongoing diversification of academic pathways which veer away from the standard GCE 'O' and 'A' Level qualifications. Examples include the Integrated programme (IP) which allows students in selected schools to by-pass the 'O' levels and directly sit for the 'A' levels while the International Baccalaureate (IB) Diploma is increasingly being offered as an accepted local university admission qualification in place of the 'A' levels. The system also adopts the pluralism of merit mindset where schools are also encouraged to grow their own niches outside academic excellence. Specific examples of these are:

- School of the Arts (SOTA):
SOTA is the first independent pre-tertiary arts school to nurture youths aged 13-18 who are talented in the arts. Its vision is to groom the next generation of artists, creative professionals and individuals who are passionate for, and committed to the arts in a multi-cultural society.

SOTA adopts a 6-year connected arts and academic curriculum. A cross-

disciplinary approach is adopted whereby students specialise in music, dance, theatre or the visual arts but will still be exposed to the basics of all four arts disciplines.

- Singapore Sports School (SSS)
SSS was established in 2004 as a specialized independent school for teenagers who aspire to be sports athletes. Students undergo intensive training in their respective sports fields as well as taking up academic programmes. They undergo a modular curriculum of study in specialized classrooms. The mode of study is tied closely to the syllabus of mainstream schools and allows them the flexibility to compete at sports competition frequently without compromising their studies. Furthermore, SSS provides pathways for polytechnics and local and overseas universities.
- Singapore University of Technology and Design (SUTD)
The SUTD is the latest university to be established in Singapore. Its research, architecture and engineering programmes will be anchored on design and technology in order to develop students who are innovative and well-versed in technical functionality.

These pathways are about providing maximal options for today's diverse learner. By giving the learner a greater sense of autonomy, it satisfies one of their basic psychological needs. By appealing to the innate abilities of students and giving them choices to pursue their interests, the sense of effectance and competence is also achieved.

Our students today deal with a tremendous amount of information made available to them from a variety of media. Having grown up with technology, they are confident in handling the latest technological devices amidst constant innovation. As technology interacts with information, students must also acquire the skills to discriminate fact from fiction and make optimal use of the information that they have to improve their learning outcomes.

It is also common these days for youths to communicate through technological platforms as opposed to face-to-face interactions. This is also true of teacher-student conversations which are now increasingly conducted via email, phone messaging or even instant messaging software. To satisfy the third basic psychological need of students i.e. on relatedness, this communicative style must continue to affirm students' confidence and respect their sense of choice and autonomy. More importantly, this form of communication should be used to build rather than to weaken teacher-student relationships and should aim to avoid causing greater misunderstanding.

Teachers, regardless of the communication platform being used, must relate to

students with sincerity and genuineness so that they feel cared for and feel a sense of closeness to. In the example of the email communication, it must be made personal and latent messages of care and support should be included, for example,

- *I'm here as myself as I'm relating to you via email.*
- *I will be supporting you, be attuned to the things you are doing well and be responsive to those things.*
- *I am encouraging you to become even better if you run in difficulties.*
- *I will provide you encouragement in the process.*
- *I have to be attuned that you are an individual and respect you as well as your own motivation.*
- *I support your sense of choice and autonomy.*

Teachers should be able to relate to students in such a way as to satisfy their basic psychological needs and help them to face the challenges of today's classrooms. From the teacher education perspective, educators need to be sensitized to the learning environment (both within and beyond the classroom) in which students function and aim to make what they teach relevant to their students' needs.

When our students have their basic psychological needs fulfilled, it helps them to focus on creativity and allows them to think more flexibly. They would also be more inclined to develop values that are more human in terms of relating to the world and their community, enabling them to make meaningful connections. Overall, they would therefore be able to achieve a greater sense of overall wellness as individuals.

Building Values, Ethics and Professionalism in 21st Century Teachers

In order to build the values, ethics and professionalism in our teachers, we must start by knowing what our students need, as they are the heart of our teacher education goals. Among the myriad roles that teachers need to take on today and in the future, the following are likely to take precedence:

- ◆ Teachers need to know and understand the desired student outcomes
- ◆ Teachers must serve their students
- ◆ Teachers must be role models

Many of our students' needs will remain constant over the years, particularly those relating to the well-being of the whole person and which are central to personal effectiveness. What will also remain constant are the social and emotional competencies that students must learn to enable them to cope with a faster pace of life and a more complex local and global environment. These are what is termed 'evergreen competencies'.

Our students must also be taught values as it will serve as an important guiding compass. It will be the basis for thought, behaviour and action. Examples of these values are the search for truth, caring for others, humility and integrity.

In this world functioning at breakneck speed, ambiguity and constant change is a given and students must learn how to manage uncertainty. Critical thinking, which refers to the ability to synthesize knowledge and information across different areas in a more complex and uncertain environment, is a necessary skill that our students must possess. Teachers must also help our children to deal with different types of complexities. In some cases, they need to be cued and be exposed to difficulties, via case studies for example, so that they do not later fumble when confronted with unknown situations.

Critical thinking must also be supported with content knowledge. Thinking cannot

exist in a vacuum. Students must therefore be knowledgeable in the key content areas of the humanities, sciences and aesthetics, including sports and music. For teachers who will be helping impart this knowledge, teacher education and teacher professional development must continue to be the conduits that enable and equip them to provide quality content teaching.

Undoubtedly, the role of the teacher today goes beyond the academic domain. They need to cultivate ethical minds for the next generation to continue championing the cause for humanity. To do this, teachers must first be role models, embodying and demonstrating sound values. This has become more important today due to the free availability and extreme fluidity of information in the technologically-driven world of information and knowledge transfer.

What do we need to do more in this technology-driven 21st century?

The 21st century is essentially technology-driven, with classrooms hosting a greater diversity of students. In this context, what differentiates our students is their ability to handle current, emerging and constantly evolving technology. Those who are unable to cope with this fast pace will need a helping hand, foremost from their teachers. Thus, it is critical that both students and teachers are highly proficient in managing the powers of technological advancement.

Among the new demands on teachers is the need to be constantly aware of their professional role in relation to their interaction with their students. With the advent of networking tools and mobile communications, the lines between a teacher's personal and professional life have become blurred. It is not uncommon for students to include their teachers in their online social networks and vice versa, allowing both sides to have a peek at each other's personal lives. In addition, teachers are giving their mobile numbers to students, allowing them greater access to each other. Indeed, the student-teacher relationship has become porous. The challenge therefore is about managing how teachers relate to their students in this new communicative environment.

In view of the pervasiveness of technology that sometimes poses as a threat, teachers must help students develop humanness. Students need to be taught how to develop and maintain friendships in the real world. They must know how to deal with both success and failure.

While the debate on what exactly constitutes soft skills is still ongoing, it is necessary to summarize some outcomes of holistic education that we must see in our 21st century students. These cover three focal areas: a strong civic disposition (i.e. being grounded and rooted in Singapore), possessing critical and creative thinking skills and

effective oral and written communication skills.

In summary, possessing values, ethics and professionalism are vital characteristics of a good teacher. In addition, they must be able to relate and understand the needs of students in order to be effective in the classrooms. Teacher education must be accordingly strengthened to address these 21st century requirements.



Challenges in Teacher Professional Development in the 21st Century

The landscape of teacher professional development is changing parallel to the changes across the education milieu. Some of the changing touch-points of learning include:

- *Teaching environment*
- *Transition of teaching to learning in our lifetime*
- *Teacher-dependent education system*
- *Time and space for students to learn*

Students today are learning anywhere and anytime at their own pace. For example, in one NGO-run school in a small village, there was no fixed curriculum. Nonetheless, the students did well in regular assessments. This result could well be due to their intrinsic motivation.

Today's landscape is a technologically-driven one. The fact that children and teachers are exposed to technology makes it a major factor in their learning. But with the changing touch-points of learning, today's digital natives might become 'digital fossils' sooner than we realise. Teacher education must help address these issues through embracing innovative pedagogies and continuing to evolve as technological advancements take place.

There is also greater porosity of thinking and knowledge access in today's highly connected world. The volume and pace of information generation and transmission are overwhelming. However, the qualitative aspect is something that cannot be easily discerned. Because of open access to information, it becomes more difficult to discern the 'truth' in the information available. The teacher then has to act as a filter for the learner and has to assume certain accountability in verifying and helping the student to make sense of the information transferred.

Given these changing touch-points in learning, there is all the more a greater need for teacher professional development. They need to be exposed to new pedagogies, assessment tools and updated knowledge in order to keep pace with the new demands of education. How then do we encourage and fuel the motivation for teachers to be effective

mentors and coaches in the classroom?

Teachers must in the first instance, take ownership of their professional development. Another issue to look into regarding professional development is taking into account competitive forces. To what extent do we look at societal forces versus individual needs? Teachers' personal expectations would need to be reconciled with societal expectations. For instance, there is a need to put a boundary around how much knowledge a teacher needs to acquire to be an effective teacher.

Academic tertiary institutions such as NIE are critical in supporting teachers in their professional development. Even as professionalism itself is being redefined, the key question is how we nurture and build capacity in the teaching force. As a 'knowledge broker', NIE's role is not so much to scale up new initiatives in the school system, but to create new knowledge that empowers teachers to function effectively in the 21st century classroom. While MOE is encouraging the growth of ground-up communities of practice such as the Professional Learning Circles (PLCs) as a mainstay of professional development, in taking this route there, is a danger of internalising knowledge, whereas what is more needed is the creation of 'new knowledge' and new concepts of teaching and learning generated by research. NIE must work together with MOE to reach a common ground on these pertinent issues.

The focus of professional development of teachers may, in the foreseeable future, see a greater emphasis on andragogy or adult learning rather than pedagogy per se. NIE may need to co-opt social anthropologists and andragogy experts to conceptualise a new model of teaching and learning that caters to our adult student teachers and classroom practitioners.

Motivating Educators in the 21st Century

Our best national resources are our youth and our children. Through our education system, we can shape them to become productive and active contributors in society. However, with the changing times, more seems to be more demanded and expected of our children today. Similarly, teachers are also required to take on more roles and an ever-widening range of tasks. They must become “intellectual storks” and continuously stay abreast of their field; they must know how to manage distance learning as communication becomes more enabled by technology; more importantly, they must be attuned to the intellectual and social needs of our students. Teachers’ responsibilities are not only confined within the school walls, they have to be sensitive to students’ social needs as well. This entails extending their help in matters relating to family relationships; teachers may even have to come forward to replace deficits in the home environment, playing the role of “mid-wives to the spirits of children” who need social and emotional learning and support.

How do we motivate teachers to keep up with this tall list?

This question on motivation assumes that the push comes from outside. In most systems, external techniques, in the form of incentives, evaluations and sanctions, are used to motivate teachers, as opposed to working with the intrinsic motivational factors. Evidence shows that this type of (external) motivation may only have the effect of discouraging teachers and backfire on the system. In some cases, putting a series of pressures on teachers only ends up disempowering them.

INTRINSIC motivation: *to act for the inherent satisfactions of an activity*

EXTRINSIC motivation: *to act in order to obtain or achieve some separable outcome*

The question to ask therefore is: How do we not undermine the strong motivation that teachers already have?

We must consider that teachers to begin with have a different set of values compared to other professions.

- *Teachers tend to be more interested in community and personal growth*
- *Teachers tend to be more invested in social activities*
- *Teachers are interested in developing their students*

Given these attributes, drawing on intrinsic motivational factors would appear to be a more effective approach in developing capacity in teachers so they can fulfil their many roles. Those who join the profession already have an inclination to show they will lead, care and inspire students towards achieving the desired outcomes of education.

How do we administer education from a teacher's standpoint?

In Deci and Ryan's Self-Determination Theory, teachers need to be supported in their own psychological needs. They must be able to continue getting access to information and resources for better teaching and as part of their professional development. They must get feedback on their strengths and weaknesses even through extrinsic motivators such as assessment and evaluation processes of teacher performance.

Developing confidence in our teachers so they can be more effective is a highly complex task, and measuring that effectiveness is even more difficult. Criteria are often too few and evaluation tools too narrow. For evaluation mechanisms to be empowering rather than controlling, they must consider not only test scores but student outcomes, socio-emotional learning and value development in students. The use of multi-modal assessment that is informational rather than administrative would therefore be a more effective means as an extrinsic motivator when used in conjunction with intrinsic motivation.

Figure 5:



As in the case of students, meeting the psychological needs of teachers can be achieved in many ways. Teachers need to belong to a community; they must be given an opportunity to share and exchange ideas so that they can bring new knowledge and energy to their teaching practice; by getting support from colleagues who face similar challenges, they can form links to their profession.

Administrators of teacher education systems must ensure an environment where teachers can internalise policy dictates from above. Policy should be evidence-based to make it work. Good ideas should not just be disseminated but assimilated, and these ideas must be translated and rationalised so that they make sense to their intended targets. For example, if we want our teachers to inculcate values, certain favourable conditions must be present to enable them to first imbibe these values.

To motivate teachers we need to get into their internal frame of reference. This includes understanding the obstacles in their paths and the pressures they face. By considering their views, administrators will be able to know what is effective and what needs to be improved. Ultimately, the key to motivating teachers lies in unlocking the same deep considerations behind learner-centred motivation. To take this discussion further, motivating teacher educators to come on board the TE²¹ endeavour requires a clear recognition of their intrinsic motivation and a willingness and openness, at every phase, to actively encourage them to sound their views and for administrators to hear their voices.

The TE21 Roundtable discussion on Perspectives in Motivating Educators and Learners was but one discourse in an ongoing dialogue that is aimed at seeking alternative views, embracing collective wisdom and provoking rigorous reflection and examination that will help to clarify, crystallise and refine the thinking that underpins NIE's model of teacher education for the 21st century. The discussion carries on and we welcome an open discussion as we move from conceptualisation to realisation.



An Institute of



Copyright © National Institute of Education 2010. First published March 2010. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means without the prior permission of the copyright owner. Enquiries should be made to: National Institute of Education, Strategic Planning and Corporate Services Department, 1 Nanyang Walk, Singapore 637616 or Email: spcs@nie.edu.sg