



NIE  
NATIONAL  
INSTITUTE OF  
EDUCATION  
SINGAPORE

# 21<sup>st</sup> Century Teacher Education: A Singapore Case

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1950-2010  
NIE, SINGAPORE  
Celebrates 60 Years  
of Teacher Education

An Institute of  NANYANG  
TECHNOLOGICAL  
UNIVERSITY



NIE  
SINGAPORE

# Development of Teacher Education at NIE



1950-2010  
NIE, SINGAPORE  
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## Review of ITP Models

### University-based vs. School-based Models

Rational of the 2 main models explained from a historical perspective

#### University-based

- Arose from the need to recognize teaching as a profession, where teachers require the award of a degree as a pre-requisite for joining the profession

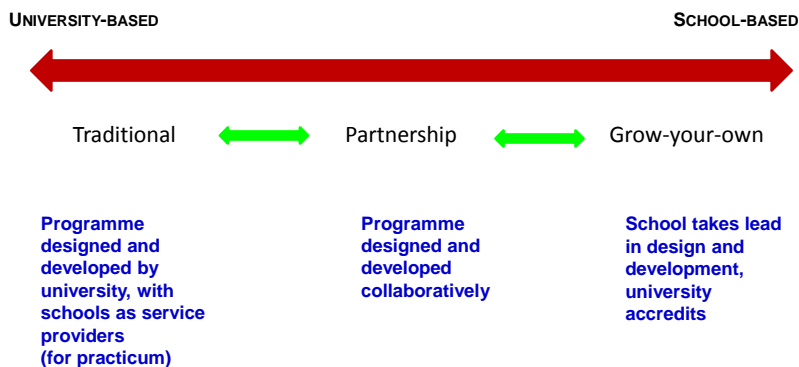
#### School-based

- Founded on perceptions that university trained teachers were removed from the real setting of the schools. In the US, most school-based institutions were however created as a response to the extreme shortage of teachers



## University-based vs. School-based Models

- The two models on a continuum





## Comparative Analysis of the two models

### University-based Model

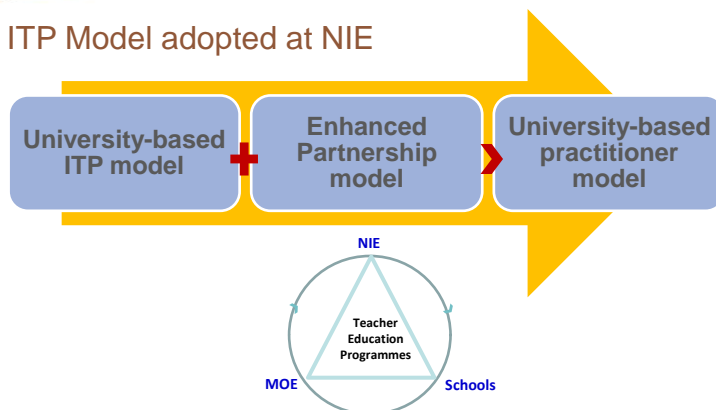
STRENGTHS	WEAKNESSES
• Strong foundation in subject matter	• Theory-practice gap
• Close connections to educational research	• Limited connections to school contexts
• Strong foundation in pedagogical content knowledge	• Dangers of simplistic formulas for teaching
• Gaining a broader perspective	
• Interaction between faculty, researchers and peers	
• Open inquiry approach to professional education knowledge	

### School-based Model


STRENGTHS	WEAKNESSES
• Promotes teaching-centred practices	• Practice-theory gap
• Develops reflective practitioners	• Lack of pedagogical content preparation
• Multi-cultural immersion experiences	• Lack of traditional coursework and theories
• Site-based learning	• Lack of connection to education research
• Experienced-based learning	• "Comunicentric" Bias



## ITP Model adopted at NIE



- University-based practitioner model is being evolved into Enhanced Partnership Model (EPM) to meet the needs of Teacher Education of 21<sup>st</sup> century
- Enhanced Partnership Model enhanced collaborative relationship with MOE and schools and address the main weakness of the theory practice gap in the university-based model incorporating case based methods, experiential learning and authentic assessment



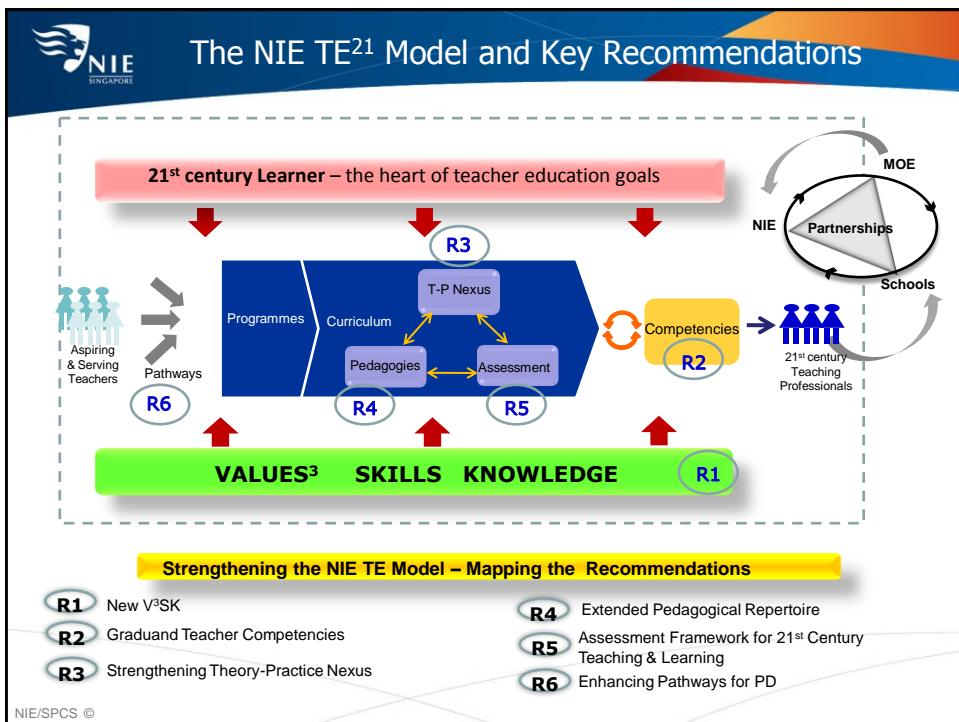
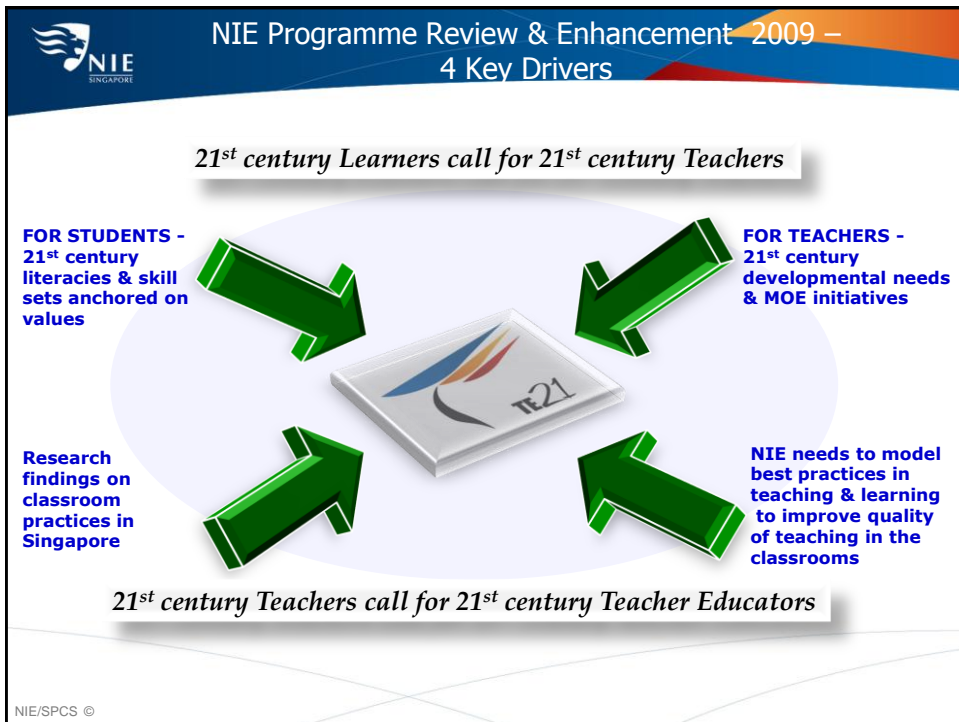
Balanced policy: Globally informed, Locally contextualized


Balanced across dimensions: time and big-picture factors



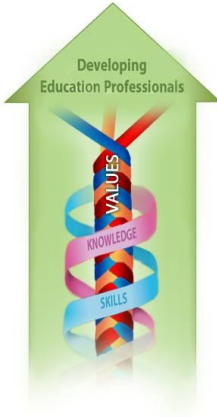
# Teacher Education of the 21<sup>st</sup> Century







R1 : New V<sup>3</sup>SK Framework – *a compass for 21<sup>st</sup> century TE*



**Attributes of the 21<sup>st</sup> Century Teaching Professional**


V1 – Learner-Centered Values	V2 – Teacher Identity	V3 – Service to the Profession and Community
<ul style="list-style-type: none"><li>• Empathy</li><li>• Belief that all children can learn</li><li>• Commitment to nurturing the potential in each child</li><li>• Valuing of diversity</li></ul>	<ul style="list-style-type: none"><li>• Aims for high standards</li><li>• Enquiring nature</li><li>• Quest for learning</li><li>• Strive to improve</li><li>• Passion</li><li>• Adaptive &amp; resilient</li><li>• Ethical</li><li>• Professionalism</li></ul>	<ul style="list-style-type: none"><li>• Collaborative learning and practice</li><li>• Building apprenticeship and mentorship</li><li>• Social responsibility &amp; engagement</li><li>• Stewardship</li></ul>

SKILLS	KNOWLEDGE
<ul style="list-style-type: none"><li>• Reflective skills &amp; thinking dispositions</li><li>• Pedagogical skills</li><li>• People management skills</li><li>• Self-management skills</li><li>• Administrative &amp; management skills</li><li>• Communication skills</li><li>• Facilitative skills</li><li>• Technological skills</li><li>• Innovation &amp; entrepreneurship skills</li><li>• Social &amp; emotional intelligence</li></ul>	<ul style="list-style-type: none"><li>• Self</li><li>• Pupil</li><li>• Community</li><li>• Subject content</li><li>• Pedagogy</li><li>• Educational foundation &amp; policies</li><li>• Curriculum</li><li>• Multicultural literacy</li><li>• Global awareness</li><li>• Environmental awareness</li></ul>

The underpinning philosophy of teacher education at NIE which guides the design, delivery and enhancement of NIE’s programmes and courses

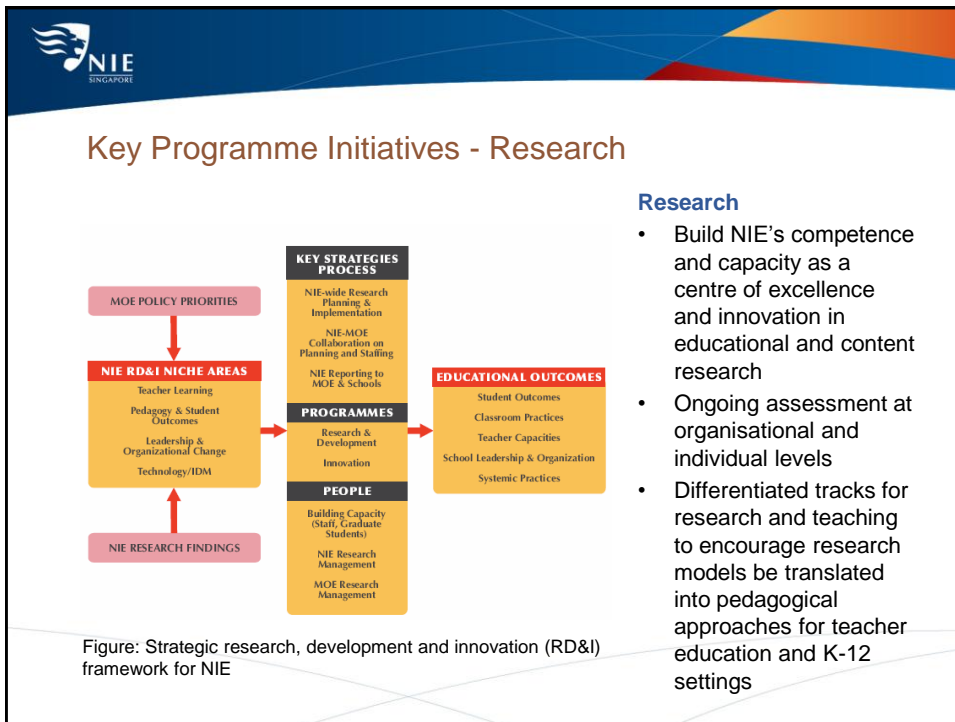
The enhanced V<sup>3</sup>SK focuses on expanding the values perspective as a three dimensional paradigm that will permeate NIE’s programmes and curricula

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Learner-centred, Valued-centred

Professionalism of ethos, pathos and logos



### Research

- Build NIE's competence and capacity as a centre of excellence and innovation in educational and content research
- Ongoing assessment at organisational and individual levels
- Differentiated tracks for research and teaching to encourage research models be translated into pedagogical approaches for teacher education and K-12 settings





## Outcomes of the NIE 3:3:3 Roadmap

### A Modern, Efficient, Transparent Corporate Entity

- Maintain a tripartite relationship with NTU and MOE
- Strong international linkages with alumni, private sector, international organisations, and global centres of excellence
- Compliance with international best practice for transparency, accountability, and good governance
- Improvements to physical and ICT infrastructure

### Serving the Global Educational Community

- Vibrant, multi-cultural campus, with global linkages and international culture
- Increase contribution to global education
- NIE programmes will attain a level of excellence parallel to top universities



## International Alliance of Leading Education Institutes

- NIE is a founding member with seven other world-leading education institutions in August 2007

### Goals:

- Draws on collective voice on educational matters to raise the profile and quality of education with government, international agencies and public at large
- Grounds for collaboration to address current local and global issues
- Draws on expertise and research-based evidence to generate ideas, identify trends and develop future scenarios
- Enhance cooperation among partner institutions



The slide features the NIE Singapore logo in the top left corner, which includes a stylized flame icon and the text 'NIE SINGAPORE'.

### Initial Teacher Preparation Programmes at NIE

- To prepare student teachers with strong educational foundation, pedagogies for effective teaching and specialized subject knowledge in at least one discipline
- Multiple pathways catered to student teachers of diverse backgrounds

#### Strengths of the Programme

- Strong integration between content and pedagogical preparation
- Design & development of programmes are backed by evidence-based educational research
- Strong tripartite link between NIE, MOE and schools
- Enhanced theory-practice linkage through a range of innovative approaches
- Holistic development through service learning



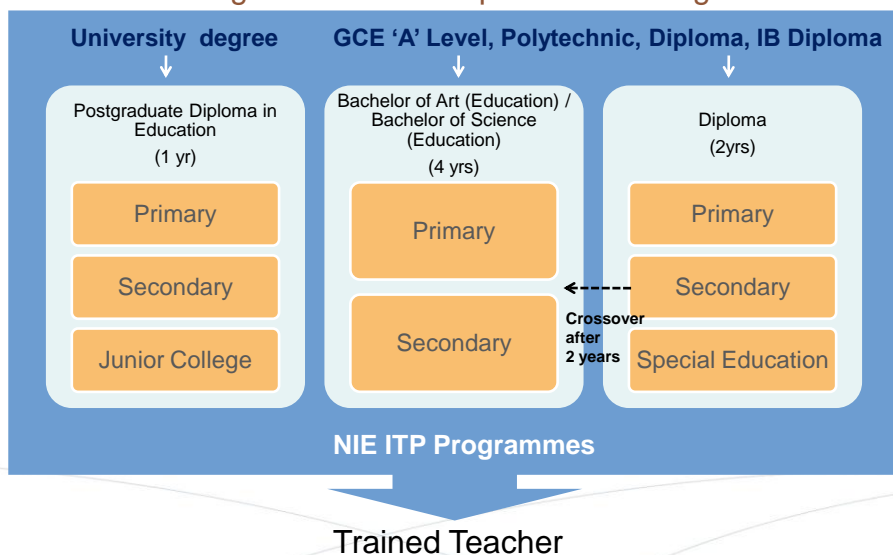
## Uniqueness of Course Content at NIE

**Initial Teacher Preparation programmes sustain academic rigour through:**

- Linking evidence-based research to teacher education for continual enhancement
- Enhancing coherence of theory-practice links
- Emphasising on school curriculum fundamentals
- Capitalising on the strong content-pedagogy dual focus in curriculum
- Providing foundation of understanding learners and how people learn best
- Providing platforms for staff to remain innovative and responsive to new and changing demands



## NIE ITP Programmes and respective teaching tracks





## NIE ITP Programme enrollment numbers

PROGRAMME	LEVEL FOR TEACHING	ACADEMIC UNITS	DURATION	ENROLMENT (2009)
PGDE	Primary, Secondary & Junior College	33 – 44 67 for PE	1yr (2yrs for PE)	1,561
BA (Ed) BSc (Ed)	Primary & Secondary	122 - 135	4 years	941 (BA) 703 (BSc)
Diploma in Education	Mainly for Primary	63 – 73	2 years	1027



## Programme Structure / Areas of Study

Content Knowledge	<ul style="list-style-type: none"> <li>Academic Subjects</li> <li>Subject Knowledge</li> </ul>
Pedagogy, theories & Skills	<ul style="list-style-type: none"> <li>Education Studies</li> <li>Curriculum Studies</li> </ul>
Language/ Communication	<ul style="list-style-type: none"> <li>Language Enhancements &amp; Academic Discourse Skills</li> </ul>
Character Development	<ul style="list-style-type: none"> <li>Group Endeavours in Service Learning</li> <li>The Meranti Project</li> </ul>
Field Experience	<ul style="list-style-type: none"> <li>Practicum (Teaching Practice)</li> </ul>



## Academic Subjects

- This area of study covers knowledge of content and fundamental concepts and principles of the subject area.
- Applicable to undergraduates pursuing Bachelor degrees only.

### Arts-based subjects

- Art
- Chinese Language
- Chinese Literature
- Drama
- English Language
- English Literature
- Geography
- History
- Malay Language
- Malay Literature
- Music

### Science-based subjects

- Biology
- Chemistry
- Family & Consumer Science
- Mathematics
- Physics
- Physical Education & Sports Science



## Subject Knowledge

- To equip student teachers with sufficient knowledge of subjects related to local syllabuses.
- Only for Primary school teachers.



## Education Studies

Develops key concepts and principles in education for effective instruction and reflective practice

### 4 core courses:

- Social context of education
- Psychology for teaching and learning
- Pupil development / Classroom management
- Use of ICT



## Curriculum Studies

- To equip student teachers with methods and approaches to deliver the curriculum of specific subjects
- The 'Art' of teaching
- Secondary school teachers: 2 subjects
- Primary school teachers: 3 subjects (in general)



## Character Development - GESL

### Group Endeavours in Service Learning (GESL)

- GESL connects student teachers with the community and provides the background knowledge and skills in service learning, community involvement projects (CIP) and project work (PW) thus developing a well-rounded teacher with a heart for others
- GESL is a local service-learning community outreach programme for all ITP student teachers
- Student teachers carry out service-learning projects with academic facilitators as mentors in groups of 20+/-
- GESL uses the experiential learning cycle as a pedagogy



## Character Development - GESL

### **GESL Projects provide student teachers with a medium to:**

- Understand themselves better through the process of mutual teamwork
- Understand each other across ethnic, religious affiliations and gender
- Develop team skills related to project planning and execution
- Develop and exercise situational leadership skills
- Encourage innovation and creativity under conditions of resource and time constraints
- Encourage educational and social entrepreneurship in the form of understanding and meeting community needs
- Develop and understand project management skills
- Acquire a framework of group project work that may be applied in schools



### Project Title: The “Green Generation” Concert – Youth for Conservation: Promoting a Green Generation

- In conjunction with the global Green Movement and World Environmental Day, team geNIE organized a green concert for a thousand people in collaboration with Singapore Botanic Gardens and the Jane Goodall Institute of Singapore, together with various NGOs such as Nature Society, Cicada Tree Eco-Place, SPCA and WWF. Through this project, they hoped to raise public awareness of the impact of human activities on biodiversity and climate change and to promote conservation.



### GESL Project featured in the media

#### NIE trainees to teach foreign workers English

SINGAPORE – A group of trainee teachers from the National Institute of Education has been helping foreign workers learn English.

They make their way to the workers' dormitory on Pulau Brani two nights a week.

And one lesson, it seems, is enough for the construction workers, who are working on the Resorts World Sentosa (RWS) project, to pick up simple conversational English.

How do they do it? Through songs and role play, for example.

The lessons were initiated by a group of 23 first-year trainee teachers as part of their community service project.

Through non-governmental organisation Transient Workers Count Too, the teachers were introduced to RWS, who were keen to have their workers learn English.

“Project Bridge” aims to equip foreign workers with basic English to express common health and work-related issues.

Ms Jenny Tan, one of the trainee teachers involved in the project, said: “We adopt the translation method. In every lesson, we have a Chinese and Tamil translator.

Any time the participants are



Foreign workers being taught conversational English by trainee teachers from the National Institute of Education. WEB TECK HEAN

unable to understand the vocabulary or sentence structure we're teaching, we have a translator to translate into their language.”

The teachers will conduct the course over three weeks, reaching out to 180 workers.

Although the numbers may not seem significant for a dormitory with 4,000 workers, Ms Tan said it was a first step to enable some workers to interact with local

communities.

“We hope that ... the workers will be able to apply what we have taught them in their daily lives. And ... the teachers will be able to learn their culture and befriend them,” she said.

But is one lesson sufficient? “Can I have one chicken rice please?” asked Mr Ganesan, a 23 year old foreign worker from India, after his lesson. WANG ENG NG

Source: Today, 8 November 2009



## Character Development – The Meranti Project

Personal and professional development programme specially tailored for student teachers in the ITP programme

### Objectives of The Meranti Project

Helping student teachers to develop better self-awareness (better tuning into self); providing a clearer idea of what National Education is all about and one's role in nurturing NE in innovative ways in the classroom; better ideas of working with diversity in the classroom, strategies for coping with being a teacher; and an affirmation of choosing teaching as a career.

### Goals and outcomes

- To better understand personal motivation for wanting to become a teacher.
- To better know and understand the fundamental values & competencies that teachers hold/practice in the attempt to be the best teacher that they can be



## Character Development – The Meranti Project

### Programme highlights:

- Conversations with veteran teachers and students
- Exploring desired student outcomes
- Facilitating National Education in schools
- Life Journey

### Key takeaways from participants:

- The importance of creating a culture of care, trust, and friendliness
- Teachers' Vision and how to apply this in school
- Knowledge about the V<sup>3</sup>SK model and GTCs and how they can use these to chart their personal and professional development



**Practicum**

- Teaching competencies are developed on site in schools
- Mentoring by Cooperating Teachers together with NIE professors/ lecturers
- Developmental Approach

<b>School Experience</b>	<b>2 wks</b>
<b>Teaching Assistantship</b>	<b>5 wks</b>
<b>Teaching Practice 1</b>	<b>5 wks</b>
<b>Teaching Practice 2</b>	<b>10 wks</b>

Enhanced School Experience (6 wks) - Conducted by MOE

Degree  
Diploma  
PGDE

**R2 : Graduatand Teacher Competencies Framework – a set of specified outcomes of ITP**


Performance Dimensions	Core Competencies
Professional Practice	1. Nurturing the child <b>CB</b> 2. Providing quality learning of child <b>CB</b> 3. Providing quality learning of child in CCA <b>CB</b> 4. Cultivating knowledge: i. with subject mastery <b>CB</b> ii. with reflective thinking <b>CB</b> iii. with analytic thinking <b>CB</b> iv. with initiative <b>AR</b> v. with creative teaching <b>AR</b> vi. with a future focus <b>AR</b>
Leadership & Management	1. Winning hearts & minds i. Understanding the environment <b>AR</b> ii. Developing others <b>AR</b> 2. Working with others i. Partnering parents <b>AR</b> ii. Working in teams <b>CB</b>
Personal Effectiveness	1. Knowing self and others i. Tuning into self <b>CB</b> ii. Exercising personal integrity <b>AR</b> iii. Understanding and respecting others <b>CB</b> iv. Resilience and adaptability <b>CB</b>

The competence expected of graduating teachers are specified in two focus levels:


**Capacity building (CB)** – demonstrate achievement of the defined competence

**Awareness raising (AR)** – aware of what the competence means but not yet able to fully demonstrate

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## R3 : Strengthening the Theory-Practice Nexus – *moving from knowing to doing*



**Reinforcing T-P linkage  
through 6 additional  
approaches**

**Strengthening current approaches which have been effective**

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- (1)** Structured Mentorship Preparation Programme
- (2)** Strengthening Mentorship before, during & after Practicum
- (3)** Greater infusion of NIE-School interactions
- (4)** Secondment of practitioners to NIE
- (5)** Reflective Teaching Model
- (6)** Structuring the Enhanced School Experience



## Extending the Pedagogical Repertoire

**Facilities design and technology are integrated to simulate school learning environments which facilitate innovative pedagogies**

**Student Teacher Notebook Scheme**



Facilitates immersion in a culture of pervasive and effective IT use early in their teaching careers. Ideal for gaining familiarity and experimentation with pedagogies that leverage on IT

**Collaborative Tutorial Room new**



Design of classroom facilitates a collaborative learning environment. Features include cluster seating, 1-to-1 computing facilities and collaborative spaces – both virtual and physical writing space

**Primary English Language (PEL) Classroom**



Model classroom which uses current technologies for teaching or reading and writing

**Teachers Language Development Centre (TLDC)**



Uses flexible and functional learning spaces where technology is seamlessly integrated to create a purposeful learning environment

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**R4 : An Extended Pedagogical Repertoire**

Mapping Pedagogical approaches & practices

EXAMPLES OF TEACHING PRACTICES	Values Anchored, Deep Knowledge and Rich Pedagogical Skills						
	CORE PEDAGOGICAL APPROACHES						
	Didactics Demonstration Modelling	Inquiry	Reflection	Simulation Authentic	Experiential Clinical Practicum	Self-Directed	Collaborative
GESL			•		•	•	•
Microteaching	•		•	•			
School-based Practicum		•	•		•		
Problem-based Learning		•	•			•	•
Case studies		•	•				•
E-portfolio			•			•	
Blended Learning	•	•	•	•			
Role playing	•		•	•	•		

Graduand Teacher Competencies (GTCs)

- NIE educators must make a conscious effort to highlight the best pedagogical practices, and model and engage students in these modes of instruction
- A Pedagogies strategy and framework will be established to ensure that appropriate and effective pedagogies are used in the curriculum and that learning environments are transformed in line with developments in the educational landscape

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**R5 : Assessment Framework for 21<sup>st</sup> Century Teaching & Learning**

- NIE needs to produce teachers :
  - who have high assessment literacy levels
  - are able to adopt the best practices to effectively evaluate student outcomes
- Assessment Competency Framework provides **a defined set of assessment literacy outcomes** to bring about assessment *of learning* and *for learning*

**Exploring a new approach to assessment**


- Portfolio** is a new direction and approach to assessment & validation of a graduate's achievement of competencies, and is aimed at developing the reflective teacher.
- For **ITP**, assessment focuses on the development of student teachers from the start of their programme through to the end of the practicum.
- For **TPD**, a professional portfolio will be one of the key components of assessment for the Professional Inquiry Project, which is a graduation requirement for the new Master of Teaching degree.

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Sustainable Structure, Quality People, Innovative Process

Long-haul: scalability



THANK YOU