The cover concept depicts the driving forces behind the genesis of NIE’s Strategic Plan for 2007 – 2012: the 3 pillars that articulate our aspirations, the 3 core strategies that will propel us forward into the next phase of growth and development; and the 3 fundamental enablers that will lead us towards success in the future.

The dynamic movement of the lines emanating from the central anchor of the “333” Roadmap design resonates with the energy and resilience of the ‘mane in the wind’ of NIE’s corporate identity. Combined with the vibrant corporate colours of NIE, the cover design of the 333 Roadmap 2007 – 2012 reflects the vigorous enthusiasm and determination of NIE in its journey forward as an Institute of Distinction.
# CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Background</td>
<td>14</td>
</tr>
<tr>
<td>1.2</td>
<td>Global Drivers of Education</td>
<td>15</td>
</tr>
<tr>
<td>1.3</td>
<td>Singapore's Evolving Education System</td>
<td>16</td>
</tr>
<tr>
<td>1.4</td>
<td>Challenges for NIE</td>
<td>19</td>
</tr>
<tr>
<td>2.1</td>
<td>NIE at a Crossroads</td>
<td>22</td>
</tr>
<tr>
<td>2.2</td>
<td>Revisiting the 1999 Strategic Plan</td>
<td>24</td>
</tr>
<tr>
<td>2.3</td>
<td>Competitive Strengths</td>
<td>26</td>
</tr>
<tr>
<td>2.4</td>
<td>External Programmes – Building the NIE Brand</td>
<td>26</td>
</tr>
<tr>
<td>2.5</td>
<td>Global Partnerships</td>
<td>26</td>
</tr>
<tr>
<td>2.6</td>
<td>Policy Advice</td>
<td>27</td>
</tr>
<tr>
<td>2.7</td>
<td>Future Objectives – An Institute of Distinction</td>
<td>28</td>
</tr>
<tr>
<td>2.8</td>
<td>Three Pillars of Success</td>
<td>28</td>
</tr>
<tr>
<td>2.9</td>
<td>Key Success Indicators</td>
<td>30</td>
</tr>
<tr>
<td>3.1</td>
<td>Introduction</td>
<td>32</td>
</tr>
<tr>
<td>3.2</td>
<td>Teacher-centric Educational Programmes: A Holistic Continuum</td>
<td>34</td>
</tr>
<tr>
<td>3.3</td>
<td>Research</td>
<td>36</td>
</tr>
<tr>
<td>3.4</td>
<td>Strategy 1: Teaching – Key Initiatives</td>
<td>40</td>
</tr>
<tr>
<td>3.5</td>
<td>Strategy 2: Research – Key Initiatives</td>
<td>44</td>
</tr>
<tr>
<td>4.1</td>
<td>Introduction</td>
<td>48</td>
</tr>
<tr>
<td>4.2</td>
<td>Human Capacity Building</td>
<td>50</td>
</tr>
<tr>
<td>4.3</td>
<td>Physical Infrastructure</td>
<td>51</td>
</tr>
<tr>
<td>4.4</td>
<td>ICT</td>
<td>53</td>
</tr>
<tr>
<td>4.5</td>
<td>Resourcing for the Strategic Plan</td>
<td>54</td>
</tr>
<tr>
<td>4.6</td>
<td>Governance and Management</td>
<td>55</td>
</tr>
<tr>
<td>4.7</td>
<td>Strategy 3: Enabling Corporate Support – Key Initiatives</td>
<td>61</td>
</tr>
<tr>
<td>5.1</td>
<td>Introduction</td>
<td>68</td>
</tr>
<tr>
<td>5.2</td>
<td>Teacher Education</td>
<td>69</td>
</tr>
<tr>
<td>5.3</td>
<td>Research</td>
<td>69</td>
</tr>
<tr>
<td>5.4</td>
<td>Institutional Capacity: A Modern, Efficient, Transparent Corporate Entity</td>
<td>70</td>
</tr>
<tr>
<td>5.5</td>
<td>Serving the Global Educational Community</td>
<td>70</td>
</tr>
<tr>
<td>A1</td>
<td>NIE Strategic Planning Taskforce and Working Groups</td>
<td>72</td>
</tr>
<tr>
<td>Figure 2-1</td>
<td>Highlights of Changes and Accomplishments from the NIE 1999 Strategic Plan</td>
<td>25</td>
</tr>
<tr>
<td>Figure 2-2</td>
<td>NIE Vision and the Three Pillars of an Institute of Distinction</td>
<td>29</td>
</tr>
<tr>
<td>Figure 3-1</td>
<td>Positioning of Teacher Preparation Programmes</td>
<td>34</td>
</tr>
<tr>
<td>Figure 3-2</td>
<td>Teacher Education Research Agenda Framework</td>
<td>36</td>
</tr>
<tr>
<td>Figure 3-3</td>
<td>Conceptual Framework of NIE’s RD&amp;I Programme</td>
<td>37</td>
</tr>
<tr>
<td>Figure 3-4</td>
<td>Division of Workload between AGs and Research Centres</td>
<td>38</td>
</tr>
<tr>
<td>Figure 4-1</td>
<td>Current Organizational Structure</td>
<td>58</td>
</tr>
<tr>
<td>Figure 4-2</td>
<td>Future Organizational Structure for NIE</td>
<td>59</td>
</tr>
<tr>
<td>Figure 4-3</td>
<td>NIE Governance Framework</td>
<td>60</td>
</tr>
<tr>
<td>Figure 4-4</td>
<td>NIE’s 3:3:3 Roadmap 2007 to 2012 – Strategies for Global Success</td>
<td>65</td>
</tr>
<tr>
<td>Figure 5-1</td>
<td>The Rubrics of Success</td>
<td>71</td>
</tr>
<tr>
<td>ACRONYMS</td>
<td>DESCRIPTION</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>ACIS</td>
<td>Academic Computing and Information Service</td>
<td></td>
</tr>
<tr>
<td>AcRF</td>
<td>Academic Research Fund</td>
<td></td>
</tr>
<tr>
<td>AG</td>
<td>Academic Group</td>
<td></td>
</tr>
<tr>
<td>A*STAR</td>
<td>Agency for Science, Technology and Research</td>
<td></td>
</tr>
<tr>
<td>APT</td>
<td>Appointment, Promotion and Tenure</td>
<td></td>
</tr>
<tr>
<td>BOS</td>
<td>NIE Board of Studies</td>
<td></td>
</tr>
<tr>
<td>CPDD</td>
<td>Curriculum Planning and Development Division</td>
<td></td>
</tr>
<tr>
<td>CRPP</td>
<td>Centre for Research in Pedagogy and Practice</td>
<td></td>
</tr>
<tr>
<td>DDM</td>
<td>Diploma in Departmental Management</td>
<td></td>
</tr>
<tr>
<td>DSM</td>
<td>Director’s Strategic Review &amp; Development Meeting</td>
<td></td>
</tr>
<tr>
<td>EDB</td>
<td>Economic Development Board</td>
<td></td>
</tr>
<tr>
<td>EdRF</td>
<td>Educational Research Fund</td>
<td></td>
</tr>
<tr>
<td>EPMS</td>
<td>Enhanced Performance Management System</td>
<td></td>
</tr>
<tr>
<td>EPO</td>
<td>External Programmes Office</td>
<td></td>
</tr>
<tr>
<td>ERC</td>
<td>Economic Restructuring Committee</td>
<td></td>
</tr>
<tr>
<td>ExCo</td>
<td>NIE Executive Committee</td>
<td></td>
</tr>
<tr>
<td>FPO</td>
<td>Foundation Programmes Office</td>
<td></td>
</tr>
<tr>
<td>FTE</td>
<td>Full-Time Equivalents</td>
<td></td>
</tr>
<tr>
<td>GESL</td>
<td>Group Endeavour in Service Learning</td>
<td></td>
</tr>
<tr>
<td>GFA</td>
<td>Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>GPPO</td>
<td>Graduate Programmes &amp; Research Office</td>
<td></td>
</tr>
<tr>
<td>I&amp;E</td>
<td>Innovation and Enterprise</td>
<td></td>
</tr>
<tr>
<td>IDM</td>
<td>Interactive Digital Media</td>
<td></td>
</tr>
<tr>
<td>ITP</td>
<td>Initial Teacher Preparation</td>
<td></td>
</tr>
<tr>
<td>KH</td>
<td>Knowledge Horizon</td>
<td></td>
</tr>
<tr>
<td>LEP</td>
<td>Leaders in Education Programme</td>
<td></td>
</tr>
<tr>
<td>LSL</td>
<td>Learning Sciences Laboratory</td>
<td></td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education</td>
<td></td>
</tr>
<tr>
<td>MP1&amp;2</td>
<td>Master Plan for IT in Education (1&amp;2)</td>
<td></td>
</tr>
<tr>
<td>NIE</td>
<td>National Institute of Education</td>
<td></td>
</tr>
<tr>
<td>NRF</td>
<td>National Research Fund</td>
<td></td>
</tr>
<tr>
<td>NTU</td>
<td>Nanyang Technological University</td>
<td></td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Cooperation and Development</td>
<td></td>
</tr>
<tr>
<td>OGS</td>
<td>Overseas Graduate Scholarships</td>
<td></td>
</tr>
<tr>
<td>PDCM</td>
<td>Professional Development Continuum Model</td>
<td></td>
</tr>
<tr>
<td>PGDE</td>
<td>Postgraduate Diploma in Education</td>
<td></td>
</tr>
<tr>
<td>RD&amp;I</td>
<td>Research, Development and Innovation</td>
<td></td>
</tr>
<tr>
<td>SEED</td>
<td>Strategies for Effective and Engaged Development of Pupils in Primary Schools</td>
<td></td>
</tr>
<tr>
<td>SEL</td>
<td>Social and Emotional Learning</td>
<td></td>
</tr>
<tr>
<td>STB</td>
<td>Staff Training Branch</td>
<td></td>
</tr>
<tr>
<td>TISMSS</td>
<td>Trends in International Mathematics and Science Study</td>
<td></td>
</tr>
<tr>
<td>TLLM</td>
<td>Teach Less, Learn More</td>
<td></td>
</tr>
<tr>
<td>TPD</td>
<td>Teacher Professional Development</td>
<td></td>
</tr>
<tr>
<td>PDEU</td>
<td>Teacher Professional Development in Education Unit</td>
<td></td>
</tr>
<tr>
<td>TSLN</td>
<td>Thinking Schools, Learning Nation</td>
<td></td>
</tr>
<tr>
<td>TVET</td>
<td>Technical and Vocational Education and Training</td>
<td></td>
</tr>
<tr>
<td>VSK</td>
<td>Value Skills Knowledge</td>
<td></td>
</tr>
<tr>
<td>YGC</td>
<td>Yunnan Garden Campus</td>
<td></td>
</tr>
</tbody>
</table>
The key to Singapore’s success lies in the values, motivations, talents, and skills of her people. Education plays a key role in this. The National Institute of Education, as the sole training institute for pre-service teacher preparation and a major provider of in-service professional development, stands at the centre of this national enterprise.

Since its establishment as the Teachers’ Training College in 1950, the National Institute of Education’s journey towards its goal as an “Institute of Distinction” has been marked by continual transformation. Over time, NIE has evolved, growing and adapting to a constantly changing educational landscape and serving the needs of Singapore’s rapidly modernizing economy.

The transformation has been dynamic and fast-paced. Courses have been restructured, the curriculum and pedagogy remodelled, and the physical and ICT infrastructure upgraded. Staff capability, organizational and governance systems have also been enhanced during this time. NIE now stands as a unique tertiary education institution, combining a practice-based curriculum with high-quality teaching and research.

It is timely for NIE to take a fresh look at its plans for the future, consult widely with its stakeholders and within its own community, to develop a road-map to guide its specific action in the medium-term.

I am happy to know that the NIE community has come together to brain-storm, discuss and debate the many ideas in this 2007-2012 Strategic Plan. NIE’s vision, to be an “Institute of Distinction”, is supported by three strategic pillars.

The next step is to be steadfast in taking action to realise the vision and plans set out in this document. NIE is fortunate to receive strong support, financial and non-financial, from the Ministry of Education to accomplish its mission. It also enjoys the unique benefits of being an autonomous institute within the Nanyang Technological University. It can draw upon the NTU’s strong academic traditions, while charting a course that reflects its special role as Singapore’s sole teacher training institution.

A strategic plan like this provides for a sense of direction, but does not take away the all-important sense of ownership and pride that every staff member, academic group and department should have in playing his or her part in making the future. I encourage all of you to create your own dreams.

On behalf of the NIE Council, I would like to express my gratitude to the more than 100 people on the various committees and taskforces who have contributed to the development of the NIE 2007-2012 Strategic Plan.

I look forward to working closely with the NIE community to see this plan come to fruition.

Mrs Tan Ching Yee
Chairperson, NIE Council and
Permanent Secretary, Ministry of Education,
Singapore

Towards an Institute of Distinction
The transformations sweeping the world of education are profound and universal in their impact, affecting all of us in diverse ways. Our increasingly globalized world sets manifold challenges for policymakers, organizations, and individuals as we strive to keep pace with the unfamiliar dynamics of a borderless knowledge-based economy.

In Singapore, our education system forms the very core of an effective response to these winds of change; it must arm our nation’s children with the skills, competencies and drive to succeed in a fiercely competitive global workplace. Anticipating and responding to these forces, the Ministry of Education’s many initiatives in the past decade have helped prepare Singapore’s students for a new environment and equip them with skills to be global citizens. Indeed, Singapore’s remarkable accomplishments in education attest to the far-sightedness and coherence of past policies, and the Ministry of Education’s vision of “a nation of thinking and committed citizens capable of meeting the challenges of the future, and an education system geared to the needs of the 21st century.”
As the sole provider of teacher education in Singapore, NIE is responsible for ensuring that teachers themselves are equipped to address new trends and educational contexts. Since its original inception as a Teachers’ Training College in 1950, NIE itself has seen dramatic changes in its approaches to delivery, and a broadening of its core mandate to meet changing needs.

Nevertheless, NIE today faces new challenges as it strives to accommodate multiple objectives in teaching, research and services. Importantly too, we must manage the apparent dichotomy of supporting a strongly established national culture and identity, whilst moving towards a vibrant, multicultural, and internationally relevant tertiary institution. In this sense NIE certainly stands at a crossroads.

For all these reasons, the National Institute of Education’s Strategic Plan for 2007-2012 represents a key milestone, not only in the work of the Institute, but also more broadly for Singapore.

In November 2006, I shared with NIE colleagues a new vision for NIE as an institution of distinction, taking its rightful place as an internationally renowned centre of excellence for both teaching and research in education. This vision rests upon three critical supporting pillars – to meet the needs of our stakeholders, achieve international recognition through educational research, and impact on the international educational fraternity through our diverse range of formal and executive programmes.

The broad support for this new vision and its supporting pillars set in motion a strategic planning process, implemented in consultation with the NIE Council and its international advisory panels. This document represents the outcome of intensive and collaborative effort, wide debate and consultation between senior management and staff. Guided by the Ministry of Education’s philosophy to embrace new educational paradigms, the 2007-2012 Strategic Plan sets out a phased programme covering teaching, research, and corporate support structures, with a range of strategic initiatives cutting across NIE’s main programme areas.

In July 2007, the NIE International Advisory Panel (IAP) comprising distinguished academics in the field of education and research, reviewed NIE’s 3:3:3 Roadmap 2007 to 2012 and gave its unequivocal endorsement. The IAP found that the strategies were focused, well thought through and directly relevant to the needs of the Singapore education system. They also stressed that timely implementation of these strategies is of great importance to the continued growth of NIE, and to the development of a quality teaching force and research-based continual improvement in instructional quality.

The process to achieving our goals will certainly be challenging; nevertheless, we are confident that the 2007-2012 Strategic Plan will provide key signposts and the necessary impetus to realign the institution with emerging trends, and position NIE as a top-ranked educational institution in Asia and beyond. In the longer term, re-tooling Singapore with new skillsets for a globalized knowledge economy will help unlock the potential of every pupil in Singapore’s schools, laying the foundation for sustaining and enhancing Singapore’s national competitiveness.

In conclusion, I would like to express my sincere thanks to the Working Groups, NIE’s Strategic Planning and Corporate Services, and all NIE staff for their enormous contributions to this Strategic Plan. Their dynamism and commitment to excellence has been a constant source of encouragement throughout the process. I am also sincerely grateful to the Chairperson of NIE’s Council, Mrs Tan Ching Yee for her strong and consistent support, encouragement and guidance throughout the development of this strategic plan.

All of us at NIE look forward to working together to implement the 2007-2012 Strategic Plan. NIE is dedicated to serving the needs of Singapore’s 28,000 teachers and to working together with them to improve the quality of our educational system for the future.

Prof. Lee Sing Kong
Director
National Institute of Education
Nanyang Technological University
NIE’S VISION, MISSION AND CORE VALUES

Vision: To be an institute of distinction

Mission: To excel in teacher education and educational research

Core Values:
- Giving our best professionally
- Being people-centred and collegial
- Upholding integrity
- Appreciating diversity of backgrounds and strengths
- Embracing change
2000
- Adopted a programme-driven organizational structure based on a matrix model with four major thrusts: Foundation Programmes, Graduate Programmes and Research, Academic Computing and Information Services and Corporate Planning and Development.
- NIE moved to its present Yunnan Garden campus at NTU.

1990s
- Merger of IE and CPE into the National Institute of Education (NIE). On 1 July 1991, NIE was established as an independent institute, with its own Board of Management, within the Nanyang Technological University. NIE started with four schools, the Schools of Arts, Science, Education and Physical Education and a Centre for Applied Research in Education (CARE).
- Introduced four-year degree programmes, Bachelor of Arts/Bachelor of Science with Diploma in Education, for training of primary school teachers.

1980s
- Review of IE organizational structure and training programmes by a MOE Review Team.
- Introduced full-time Diploma in Education programme with a practical training component, and a one-year full-time Further Professional Certificate in Education (FPCE) course for the upgrading of non-graduate teachers in primary schools.
- College of Physical Education (CPE) established in 1984 to offer a two-year Diploma in Physical Education.
- One-year Diploma in Educational Administration (DEA) introduced for school leaders.

2004
- Customized LEP conducted for a group of participants from the Middle East.

1970s
- Institute of Education Act passed in Parliament, leading to establishment of the Institute of Education (IE).
- Teacher-in-Training Scheme introduced (1979) together with the Certificate in Education programme for training of pre-primary and lower primary teachers.

2001
- Framework for continual education for teachers to attain higher educational qualifications through an accreditation system was developed and the Advanced Diploma and Advanced Postgraduate Diploma courses were launched based on the accreditation system.

1960s
- TTC introduced a single system of in-service training in the four language mediums (Malay, Chinese, Tamil, English). Launched one-year in-service Certificate in Education for graduates.

1950s
- Establishment of Teachers’ Training College (TTC) and Department of Education, University of Malaya.

2005
- Launch of the Professional Development Continuum Model (PDCM) which provides a structured path for teachers to obtain higher professional certification, including undergraduate and postgraduate degrees through the professional development route.
- Learning Sciences Laboratory (LSL) set up with MOE funding.
- Classroom of the Future officially launched
- External Programmes Office (EPO) established.

1970s
- Diploma in Education Administration (DEA) realigned as an executive programme, and introduced as the Leaders in Education Programme (LEP).
- BA/BSc with Diploma in Education repositioned and renamed as Bachelor of Arts (Education)/Bachelor of Science (Education).

2006
- NTU corporatized. NIE remains an autonomous institute within NTU and is governed by the NIE Charter.
- Doctor of Education Dual Degree with the Institute of Education (IoE), University of London, launched.

2003
- Centre for Research in Pedagogy and Practice (CPPP) established at NIE. Knowledge Horizon set up to promote NIE’s consultancy capabilities both locally and internationally.

2002
- Official opening of the new NIE complex at 1 Nanyang Walk.

2007
- Strategic Planning Process 2007 initiated.
As an institution NIE faces new and complex challenges as it seeks to write for itself a new agenda for education in Singapore, and forge a leadership role on the global stage. Indeed, it is increasingly evident that today NIE stands at a crossroads in its evolution.

There is wide realization that the changes engulfing us today are so rapid, and their impact so profound, that radical changes in our educational paradigms, pedagogies and delivery will be needed in order to sustain a culture of continuing national competitiveness and full participation in a globalized marketplace.

In the face of such imperatives, what then, should be NIE’s institutional response? To realize its vision as an institute of distinction, NIE must develop and implement coherent strategies to achieve and sustain excellence in teacher education and research. Moreover, these strategies will necessitate an agile institutional environment that is responsive to changing needs, and maintains a continuing global relevance within the international educational fraternity. To enable NIE to fully occupy its desired market niche by 2012, it will need to fully exploit and leverage its unique competitive strengths, particularly its practice-based curriculum, and its position as the sole authority on education in Singapore.

In keeping with the MOE’s philosophy to embrace new educational paradigms, NIE’s strategic planning process recognizes the criticality of this new mandate for change. The 2007-2012 NIE Strategic Plan therefore presents a unique and timely opportunity to realign the institution with emerging trends, and position NIE as a top-ranked educational institution in Asia, and globally.

Chapter 1 of this Strategic Plan describes the profound and transformative changes which are impacting today’s global educational landscape, and sets out the key challenges that globalization presents for Singapore and the NIE.

To provide some context for the current strategic planning process, Chapter 2 presents a situational analysis of NIE’s response to the 1999 Strategic Plan recommendations, and the advances and changes in approach that it subsequently
implemented institution-wide. The parameters that define an Institute of Distinction are then discussed, introducing the grounding principles upon which the current strategic planning process is based. Chapter 2 also summarizes NIE’s efforts to establish global partnerships, build the NIE brand, provide consultancy services through its external programmes, and offer advice to inform policy-making.

Three overarching themes (pillars) guide NIE’s strategy for 2007-2012: to meet the needs of NIE’s stakeholders, achieve international recognition in educational research, and impact upon the international educational fraternity. These “three pillars” provide the broad institutional aspirations which encapsulate a range of more specific objectives across the range of NIE’s core operations. They thus act as reference points at the operational level, so that the contribution of individual activities can be evaluated, qualitatively or quantitatively. In order to succeed in its goals, NIE’s strategic plan must be implemented in a manner which demonstrates responsiveness, relevance and quality.

With these criteria in mind, the NIE Working Groups for each programme area have proposed three operational strategies— for teaching, research, and the corporate support framework, respectively. These strategies cut across programme boundaries and present an opportunity for coherence in implementation across the entire organization. This cross-cutting approach underscores NIE’s teacher-centric, holistic philosophy, whilst recognizing the potential contributions of each individual initiative towards long-term goals. Chapter 3 presents operational strategies for NIE’s teaching and research, development and innovation programmes, which together represent the institution’s core mandate. Key initiatives supporting both strategies are described.

Chapter 4 describes the third operational strategy to introduce a proactive and enabling corporate support framework that anticipates NIE’s future needs in organizational management, governance, physical infrastructure and ICT. Such a structure will incorporate an employment environment that allows flexibility between teaching and research roles, assigning each with an equitable value in performance assessments. This chapter also covers resourcing of the overall strategic plan.

As NIE’s academic and support staff work together to implement the 2007-2012 Strategic Plan, a vision for a common future will be critical to success. The concluding chapter articulates the rubrics of success as applied to NIE’s key programmes, together with the institutional capacity required to deliver the desired outcomes.
The Changing Global Landscape

The National Institute of Education’s Strategic Plan for 2007-2012 has been prepared as part of an ongoing effort to maintain relevance, responsiveness and unrivalled standards of excellence in Singapore’s education system. Change has always been with us, but the rapid acceleration of the pace of change as well as the extent of its impact presents unprecedented challenges as well as opportunities for NIE. Never before have institutions needed to cast aside the old and reinvent themselves so fast, simply in order to survive in our globalized economy.

Singapore’s accomplishments in education are in large measure the result of the Ministry of Education’s appreciation of the implications of these new trends, and its flexible approach to policymaking. As Singapore’s sole teacher education facility, NIE has attempted to follow this lead, winning plaudits over a relatively short period for its record of progressive programmes, responsiveness to stakeholder needs, and world-class quality standards.

There is wide realization that the changes engulfing our society today are so rapid, and their impact so profound, that radical changes in our educational paradigms, pedagogies and delivery will be needed in order to sustain a culture of continuing national competitiveness and full participation in a globalized marketplace. NIE indeed stands at a crossroads in its development.

In the face of such imperatives, what then, should be NIE’s institutional response? To realize its vision as an institute of distinction, NIE must develop and implement coherent strategies to achieve and sustain excellence in teacher education and research. Moreover, these strategies will necessitate an agile institutional environment that is responsive to changing needs,
and maintains a continuing global relevance within the international educational fraternity. To enable NIE to fully occupy its desired market niche by 2012, it will need to fully exploit and leverage its unique competitive strengths, particularly its practice-based curriculum, and its position as the sole authority on education in Singapore.

NIE is well-placed to consolidate its global reputation and further develop as an international brand with world-class standing, but the challenges ahead for NIE are fundamental and cross-cutting in nature, and carry profound implications for the institution’s future. Today, NIE indeed stands at a crossroads in its evolution.

NIE’s 3:3:3 Roadmap 2007 to 2012 presents a unique and timely opportunity to realign the institution with emerging trends and position NIE as a top-ranked educational institution in Asia and internationally.

The 3:3:3 Roadmap – Pillars, Strategies, Success Factors
In order to realize NIE’s vision as an Institute of Distinction, three overarching themes (pillars) have been identified. These are as follows:-

Pillar 1: Meeting the needs of stakeholders
Pillar 2: Achieving international recognition through educational research
Pillar 3: Impacting the educational fraternity internationally

The three pillars articulate broad institutional aspirations which encapsulate specific objectives across the range of NIE’s core operations. Operationally, these aspirations will be realized by implementing three core strategies:

Strategy 1 – Teaching Programmes
Establish NIE as a world-class provider of teacher learning programmes; transforming NIE into a vibrant multi-cultural institution; serving the needs of educators in Singapore and internationally.

Strategy 2 – Research Programmes
Build NIE’s competence and capacity as a centre of excellence and innovation in educational and content research, through recruitment and promotion of sterling academic staff, and leveraging on international research partnerships.

Strategy 3 – Corporate Support
Introduce a proactive and enabling corporate support environment that anticipates NIE’s future needs in organizational management, governance, physical infrastructure and ICT, and incorporates an employment framework to allow flexibility between teaching and research roles, assigning each with an equitable value in performance assessments.

At the tactical level, each of the three strategies are supported by a range of sub-strategies and initiatives. These will be implemented in a phased and coordinated manner, with progress of each activity measured against agreed milestones covering the plan period.

Successful implementation of the entire 3:3:3 Roadmap will require that each individual initiative uphold three fundamental enabling factors: responsiveness, relevance and excellence.
EXECUTIVE SUMMARY

The Rubrics of Success

Having introduced and successfully implemented the three operational strategies and their respective initiatives, how will NIE have changed by 2012 as a result of this Strategic Plan? What are the rubrics of success?

Through undertaking major changes in the areas of international benchmarking, curriculum refinement, enhancing quality through evidence-based research, and establishing the linkages between research and student outcomes, a new organizational culture will emerge at NIE which is truly international, and truly outstanding.

It is anticipated that through effective and cohesive implementation of the 3:3:3 Roadmap, NIE’s reputation for excellence will be further enhanced through the diverse range of proposed initiatives detailed in this document. The targets which NIE has set for itself are ambitious, but nevertheless realistic and achievable.

It is envisioned that by 2012, NIE will have achieved the following outcomes:

Teacher Education
- A holistic teacher-centric continuum, integrating pre- and in-service professional development
- Mapping of the PGDE into the MTeach/Ed programmes
- Evidence-based curricula, informed by research
- Excellence which is internationally benchmarked
- New ICT-enabled pedagogies
- Globalized education in a multi-cultural setting

Research, Development and Innovation
- Strategic RD&I framework to maintain focus on priorities and relevance to global research issues
- Internationally distinguished academic staff profile
- Academic freedom to pursue diverse research interests
- Uniquely positioned to exploit synergies between teaching and research through flexible, differentiated workload mechanism
- Expansion of NIE’s postgraduate research and fellowship programmes
- Alignment with international norms and standards
- Participation in major international research partnerships
- Broader funding base

Institutional Capacity: A Modern, Efficient, Transparent Corporate Entity
- Tripartite relationship with NTU and with MOE will continue to generate valuable synergies and long-term stability
- Strong international linkages with alumni, private sector, international organizations and global centres of excellence.
- Projected enrolment of 7,800 FTE by 2012
- Upgraded research, compensation and career development frameworks to ensure competitiveness against national and international benchmarks
- Compliance with international best practice for transparency, accountability, and good governance
- Institution-wide management information system will improve efficiency, responsiveness and transparency in planning, administration, resource allocation and inter-departmental collaboration
- Improved physical and ICT infrastructure to maximize flexibility to accommodate new learning environments and paradigms, optimize utilization efficiency of existing facilities, on and off-campus

Serving the Global Educational Community
- Diverse and important contributions to Singapore’s social fabric, to prepare Singapore’s future citizens with new skills to compete in a technology-driven world without borders
- Vibrant, multi-cultural campus, with global linkages and an international culture
- Increased contribution to global education
- NIE and its programmes – including teaching, research and consultancy services – will attain a level of excellence parallel to that of top universities, and can thus serve not only Singapore, but a much wider diversity of cultures across the globe
CHAPTER ONE

Education in a Fast-Changing Landscape

1.1 Background
1.2 Global Drivers of Education
1.3 Singapore’s Evolving Education System
1.4 Challenges for NIE
Education in a Fast-Changing Landscape

1.1 Background

As an institution NIE faces new and complex challenges as it seeks to write for itself a new agenda for education in Singapore, and also forge a leadership role on the global stage. Indeed, it is increasingly evident that today NIE stands at a crossroads in its evolution.

There is wide realization that the changes engulfing us today are so rapid, and their impact so profound, that radical changes in our educational paradigms, pedagogies and delivery will be needed in order to sustain a culture of continuing national competitiveness and full participation in a globalized marketplace.

To set this Strategic Plan in its proper context, this chapter highlights some key drivers which are transforming the global educational landscape, and discusses key accomplishments of Singapore’s educational system as it strives to meet national needs and prepare its graduates for a fast-changing society. The chapter continues with an overview of the overall policy context, and concludes with a summary of specific challenges facing NIE as it aligns to new global realities.
1.2 Global Drivers of Education

Globalization has brought with it radical changes in economies, society, and culture, which together are transforming the fabric of our society. Among these are the ‘marketization’ of tertiary education, new learning paradigms, flexible institutional settings and delivery mechanisms, new pedagogies, and wider student choice. For Singapore, as for other economies, these trends pose as many challenges as opportunities. How might they reshape the workplace of the future? To what extent will they impact on the nation’s future educational needs, and how can our educational institutions realign to ensure continuing relevance and responsiveness in delivery of education in a globalized knowledge-based economy?

Strong linkages between the world of work, vocational training and basic education are crucial to pave the way to learning for survival and growth. However, whilst the needs of the workplace are under constant evolution, training and education delivery systems, along with their regulatory frameworks, tend to react much more slowly.

A recent report by the Organization for Economic Co-operation and Development (OECD) on Knowledge Management in the Learning Society: Education and Skills (OECD, 2000, 30), notes that from an educational perspective, the development of knowledge-based economies imposes five major challenges on educational systems:

1. Students should be prepared for a professional life characterised by rapid change, where learning by doing and learning in interaction with others are crucial to economic success and social cohesion;
2. Those who may be slow learners must receive a better foundation for participating fully in social and economic activities;
3. Adult training as part of life-long learning is a key element of the learning economy;
4. The ethical dimension and the contribution to the formation of social capital are increasingly important;
5. The rapid growth of knowledge production and knowledge mediation in the private sector may call for a new division of labour and collaboration between schools and other places of learning.

The OECD report argues that future job creation in major economies is likely to be concentrated in knowledge-intensive industries. The need for highly skilled and well educated workers will accelerate, stimulating a demand for life-long education. This will result in unprecedented pressure on educational services across the board, from early childhood to adult education. Educational systems everywhere must therefore anticipate and prepare to serve this need. Recognizing that institutional responsiveness will be key to continuing relevance, NIE must constantly strive to ensure that changing global realities are swiftly reflected in the classroom.

The demands and concerns facing tertiary education and the institutional responses in terms of changes in the objectives, landscape, focus, and modes of delivery are creating new realities and dynamics. The above global trends pose serious challenges and vital questions for the planning of tertiary education and training, and are forcing a rethinking in the way tertiary education is perceived and managed and in the priorities, scale, and speed of its development. Clearly, for Singapore, as well as for NIE, business as usual will not suffice.
Singapore’s socio-economic development over the past four decades has by any measure been remarkable. An understanding of the need for constant reinvention has allowed the nation to weather economic adversity and achieve strong and sustained growth, both in economic prosperity and across a range of social indicators.

Fundamental to these achievements is a highly educated population. As early as 1986, policymakers acknowledged that the accelerating pace of globalization and its impact on Singapore’s future prosperity presented urgent challenges. The report of the Economic Review Committee (ERC, 1986), The Singapore Economy: New Directions, highlighted the need for creativity and broad-based holistic education to provide the skills needed for Singapore to move towards higher value, technology-intensive industries.

Singapore has always provided a well-funded and efficient system of public education, which over the past 25 years has made tremendous advances. Currently, spending on education accounts for almost 4% of Singapore’s GDP. Secondary schools have a retention rate of 95% post-secondary involvement in education, and training is above 70%. Between 1970 and 2004 literacy rates jumped from 68.9% to 94.2%, and during the same period the percentage of university graduates in the population increased from 1.9% to 12.1%. Such results demonstrate the vision and effectiveness of education policies over the past 25 years.

In 1998, the Committee on Singapore’s Competitiveness and the Economic Review Committee (chaired by the current Prime Minister), made a series of key recommendations, which subsequently committed Singapore to the following macro-economic policy context:

- a globalized economy where Singapore is a key node in the global network, linked to all the major developed economies;
- a creative and entrepreneurial nation willing to take risks to create fresh businesses and blaze new paths to success; and
- a diversified economy powered by the twin engines of manufacturing and services.

These new policy settings were announced at the launch of the Thinking Schools Learning Nation (TSLN) initiative in 1997. Since that time, educational policy in Singapore has been driven by a vision of:

“A nation of thinking and committed citizens capable of meeting the challenges of the future, and an education system geared to the needs of the 21st century.”
As a direct result of the coherence of this policy context, Singapore’s tertiary education institutions have consistently achieved high standards of excellence. The quality and relevance of Singapore’s Technical and Vocational Education and Training (TVET) system, and especially the excellence of education and training at the polytechnics, have both been acknowledged by the World Bank.

Government policy today aims to provide flexibility and enhance institutional responsibility by corporatizing the universities, and attract talent by providing university places for non-Singaporeans. In addition to attracting such institutions as the Chicago Business School, INSEAD and others have set up campuses in Singapore and this reinforces Singapore’s conviction that high quality research underpins the transformation to a knowledge-based economy.

Singapore’s standing in international educational rankings continues to rise, excelling in international assessments, particularly in mathematics and science (e.g. in the Trends in International Mathematics and Science Study, or TIMSS). Such accomplishments on the international stage have reinforced Singapore’s confidence in its aim to become a regional education hub – a vision endorsed by MOE’s Universities International Academic Advisory Panel.

Already this vision is within reach. Each year increasing numbers of overseas students from Asia and beyond seek educational opportunities in Singapore, and elite schools and tertiary institutions are opening Singapore branches. International pairings and partnerships are increasingly seen. The strategic partnerships between Duke and NUS Medical School, Nanyang Technological University (NTU) and Massachusetts Institute of Technology (MIT), and NIE’s new dual degree Ed.D. programme with the Institute of Education, University of London, all attest to a new recognition of Singapore’s growing global standing in education.

However, Singapore’s policymakers have not been content to rest on such achievements. As early as the 1990’s, reports such as Improving Primary School Education (1991), the Thinking Schools Learning Nation initiative (1997) and the Report of the Junior College / Upper Secondary Review Committee (2002), among others, laid the foundation for a more flexible, student-centric, multi-ability reward system.

Today this evolution continues with the Teach Less, Learn More (TLLM) initiative, the IT Master Plan 1 and 2 (MP1 and 2) and the more recent Future Schools projects. These initiatives indicate an appreciation of the power of new technologies to enhance deep engagement with learning. The Future Schools project in particular, exemplifies Singapore’s commitment to developing innovative technologies to prepare school leavers for careers in emerging disciplines such as the interactive digital media. Moreover, the Future Schools project aims to go beyond using ICT to enhance the existing curriculum and pedagogies, towards developing ICT-enabled pedagogies and ultimately re-designing the entire curriculum. The project also plans to develop new ICT-leveraged assessment methods to bring about engaged learning for students. It is expected that about 15 Future Schools will be operational by 2015.
The government’s vision to establish Singapore as an educational hub in Asia signalled a new emphasis on its relationship with the wider international fraternity. Offshore international education in Singapore will act as a catalyst to prepare local institutions for the next wave of the nation’s economic development, as it orients itself to become a leading regional player in a knowledge economy, driven by a world class tertiary sector.

Global demand for international higher education is predicted to quadruple from around 1.8 million students in 2002 to 7.2 million by 2025. In order to tap into this important market, Singapore will need to focus on its strengths, including its English-speaking environment and high educational standards as well as its reputation for public order and safety.

Despite the intensifying competition in the international education market, Singapore has natural advantages that attract international students here – a safe environment, cosmopolitan society, high living standards and the mix of Eastern and Western culture and education. The EDB, with its ‘Global Schoolhouse Initiative’ has for some time played a leading role in efforts to attract overseas students and universities to Singapore and contribute to a vibrant, multi-cultural educational environment.

A government economic review panel has recommended a national target of 150,000 foreign students by 2012 – more than double the 2005 figure of 66,000 – estimating that this would not only create 22,000 jobs but also raise the education sector’s contribution to GDP from the current 1.9 percent ($3 billion or US$1.9 billion) to 5 percent.
1.4 Challenges for NIE

Education reform blueprints are just that – they suggest directions for change. But how well can change be managed in Singapore, and particularly, by NIE? Singapore’s competitors are in developed countries; they too are aware of the need to enhance national human resources and attract talent, and so all OECD countries are engaged in major programmes of educational reform. Singapore’s ambitions to enhance R&D to drive high value-added growth must confront a weak R&D culture and an education system still focused on content mastery, teacher teaching for examination success, large class sizes and a not-yet pervasive innovation and enterprise culture.

Singapore does however have the advantages of a high regard for education, a firm emphasis on standards, high levels of bilingual competence and a well-funded, well-led system. In teacher education, the alignment of NIE’s teacher preparation and research with MOE policies, as well as the maintenance of its close links with school leaders and practitioners, will both be key to future success.

In order to ensure that NIE can realize its vision and secure its position as a world-class educational institution, it must address a number of key challenges:

- NIE will need to develop innovative programmes to secure a world-class institutional reputation. In this respect its position as the single national institution for education may be viewed as both a strength and a weakness. As a single institution with close links to MOE and schools, a consistently high standard of teacher preparation has been achieved. However, NIE currently employs a single model with only minor variations to differentiate Dip.Ed, PGDE, BA/BSc (Ed) programmes. Issues of programme design thus need due consideration.
- NIE will need to work towards fully exploiting ICTs in the teaching-learning process. Currently the Blackboard (BB) platform represents the most popular use of ICTs, with about 66% of courses using BB as a course management and delivery tool.
- NIE will need to ensure that the next generation of teachers acquires stronger competencies in curriculum design, and in teaching for deep engagement and assessment.
- In terms of teacher education research, NIE will need to examine more closely the impact of teacher preparation and teaching on pupil achievement and broader outcomes.
- In order to achieve international distinction in education research, NIE will need to expand the opportunities for staff to engage in research through a reduction in their currently heavy teaching loads – for example, by rationalizing and redesigning programmes – and to expand the research capacity of NIE through new staff appointments, particularly at senior level, and expanded research-based higher degree programmes.
Recognizing the growing significance of these challenges, NIE has already developed new initial teacher preparation and leadership programmes. These now more closely reflect new pedagogies, such as those emerging from initiatives such as TLLM, MP 2, Strategies for Effective and Engaged Development of Pupils in Primary Schools (SEED), and Innovation and Enterprise (I&E). The teacher preparation challenge will be not only to prepare a new generation of teachers with relevant competencies (especially in ICT), but also to assist in-service teachers to refresh their pedagogy. Plans are also under way to incorporate knowledge building, visualizations and simulations into pre-service modules.

As with other tertiary education systems and institutions everywhere, NIE operates in an exciting and challenging time, at the intersection of high global and local demands, optimism over the potential of technological and pedagogical revolutions, and constraining human, technological and financial capacities. What happens next depends on attitude and action.

NIE is well positioned to meet the challenges before it. However, with rapid and far-reaching policy changes already transforming schools, it is imperative that NIE acts now to position itself to cope with a future school system setting itself ever-higher standards, with the goal of establishing Singapore as an international benchmark for excellence in education.
CHAPTER TWO

Relevance, Responsiveness and Excellence: Building on Foundations of Success

2.1 NIE at a Crossroads
2.2 Revisiting the 1999 Strategic Plan
2.3 Competitive Strengths
2.4 External Programmes – Building the NIE Brand
2.5 Global Partnerships
2.6 Policy Advice
2.7 Future Objectives – An Institute of Distinction
2.8 Three Pillars of Success
2.9 Key Success Indicators
Relevance, Responsiveness and Excellence: Building on Foundations of Success

2.1 NIE at a Crossroads
Singapore’s accomplishments in education are in large measure the result of the Ministry of Education’s approach to policymaking. As Singapore’s sole teacher education facility, NIE has followed this lead, establishing over a relatively short period an impressive record for its progressive programmes, responsiveness to stakeholder needs, and world-class quality standards. NIE is responsible for all initial teacher training, a substantial portion of professional development and almost all significant educational research conducted in Singapore. Over the last five years NIE has become internationally recognized as a leading centre for educational preparation and research; NIE’s courses for preparation of school principals through the Leaders in Education Programme (LEP) and its international variant LEPI have both attracted worldwide attention.
Underpinning NIE’s teaching programme is a commitment to building a world-class research programme. The establishment of the Centre for Research in Pedagogy and Practice (CRPP) in 2003 and the Learning Sciences Laboratory (LSL) in 2005 put Singapore firmly in the global education research spotlight. Today, NIE is one of the largest educational institutions in Asia, with 400 academic and 352 support staff and 123 research staff.

Such accomplishments reflect NIE’s drive, its collaborative culture and an uncompromising stance on quality standards.

NIE is well-placed to consolidate its growing global reputation and further develop as an international brand with world-wide standing, but the challenges ahead for NIE are fundamental and cross-cutting in nature, and carry profound implications for the institution’s future. In order to achieve its vision as an institute of distinction, in keeping with the MOE’s philosophy to embrace new educational paradigms, NIE must recognize the threats and opportunities inherent in these challenges, and take bold steps to embrace change and emerge as a leader in the evolving global educational landscape.

To make progress at international level, NIE will need to leverage on its success in achieving excellence in the domestic arena. NIE will also need to extend its integration and resonance with the global educational fraternity at all levels - through increasing enrolments of overseas students, faculty exchanges, adoption of new paradigms in global education, leadership in international standard-setting, research, and market positioning, and through partnerships with global centres of educational excellence.
2.2 Revisiting the 1999 Strategic Plan

The rapid evolution of NIE, its guiding principles and its programmes over the past decade can best be understood within the context of the 1999 Strategic Plan.

In March 1998, a Steering Committee chaired by the then Senior Minister of State for Education, Dr Aline Wong, was set up to review the role of teacher training to prepare teachers to meet challenges facing the education system. The Committee made broad recommendations on key changes needed to position teacher training for the future, which were approved by the MOE Ministerial Committee in October 1998.

To implement the Committee’s recommendations, three working committees, comprising NIE Council Members, senior NIE staff and MOE officials were set up to develop concrete plans for NIE, as the main teacher training institute in Singapore. The review recommended fundamental changes to position teacher training to meet future needs. The planning process at that time focused on two key areas:

a) NIE’s role in the provision of foundation training for trainee teachers and professional upgrading for serving teachers; and
b) NIE’s corporate support system as an enabling environment for NIE to deliver quality programmes, research and consultancy services.

The resulting strategic plan for NIE - “Developing Strategic Plans for the National Institute of Education” (August 1999) – contained detailed recommendations for NIE in the following areas:

- Review of the teacher training curriculum
- Review of NIE's degree programmes
- Plans for continual teacher training and its implementation
- Human resource development
- Research focus and funding
- Organizational structure and development
- Strengthening external linkages

As a response to the 1999 Strategic Plan recommendations, NIE implemented sweeping changes in the above areas, many of which now form the foundations for this Strategic Plan, 2007-2012. Highlights of achievements of the 1999 Strategic Plans are presented in Figure 2-1.
TEACHER EDUCATION AND LIFE-LONG LEARNING PROGRAMMES

• Following the review of Initial Teacher Preparation, NIE developed a new “Framework of Desired Attributes of a Beginning Teacher”, in which Values, Skills, and Knowledge (VSK) are emphasized.
• Introduced new four-year Bachelor of Arts/Bachelor of Science (Education) programmes.
• Significant increases in enrolments in initial teacher preparation programmes (10.6% increase) and teacher professional development (in-service) programmes (250% increase) during this period.

• Introduced the “Professional Development Continuum Model” (PDCM) to provide increased options for serving teachers to seek higher academic certification on a modular basis.
• Introduced the first Dual Degree for the EdD (Doctor of Education), to be offered jointly with the Institute of Education, University of London, U.K.
• Developed Leaders in Education Programme (LEP) with its partner LEPI into successful NIE-branded offerings.

RESEARCH, DEVELOPMENT AND INNOVATION PROGRAMMES

• The Centre for Research in Pedagogy and Practice (CRPP) was established in cooperation with the MOE, and is now a recognized international resource.
• Education research became a significant part of NIE’s agenda contributing to improved instructional pedagogy, curriculum content and evidence-based policy setting.
• Publication of 336 refereed papers in 2006 (up 61% from 2002).
• NIE research presence at key education meetings significantly increased, reaching 42 papers presented at the AERA in 2006.
• Support for content and educational research increased substantially over this period.
• Learning Sciences Laboratory (LSL) established to enhance use of technology (ICT, IDM) in teaching and learning to complement the CRPP effort.

NIE STAFF CAPACITY

• Academic staff numbers increased from 284 to 400 from 1998 to 2007 in response to rising demand for new programmes and specialties.
• NIE recognized for its unique complementary strengths in content and pedagogy, leading to strong evidence-supported teaching.

PHYSICAL AND ICT INFRASTRUCTURE

• NIE moved into its new 16 ha Yunnan campus.
• Unique supportive teacher-centric facilities – the “Classroom of the Future” and the DNA-Centre are built with MOE’s support.
• The campus became a wireless broadband learning environment.
• New Student Hub opened to serve as a focus for student-teacher activities.

GOVERNANCE, ORGANIZATION AND MANAGEMENT

• A matrix management system was implemented in July 2000, comprising four Programme Offices (which drive internal strategy and programmes) and eleven Academic Groups (housing discipline clusters of staff and facilities) to provide better focus and responsiveness.
• NIE began offering post-graduate programmes at Masters and Doctorate levels through NTU.

TRANSITING FROM LOCAL TO GLOBAL

• A new entity called Knowledge Horizon was created to offer NIE’s expertise overseas and to market the “NIE Brand” of Singapore education.
• Formal partnerships have been established with premier educational institutions worldwide.
2.3 Competitive Strengths
NIE as an institution is endowed with unique competitive strengths, particularly its practice-based curriculum, and its position as the sole authority on education in Singapore. These strengths are increasingly being complemented by NIE’s fast-emerging reputation for educational research at CRPP and LSL. An institution-wide appreciation of these competitive strengths will provide clear rationale to facilitate priority-setting processes, and help maintain organizational focus in the face of multiple objectives and competing demands on scarce resources.

Accordingly, these unique competitive strengths need to be leveraged to enable NIE to define and optimize NIE’s occupation of its market niche.

2.4 External Programmes – Building The NIE Brand
The ‘NIE Brand’ has expanded rapidly and grown in stature over the years; NIE now offers a wide range of courses in all areas of education, including related aspects of the social sciences and professional practice. Recognition of NIE’s global standing is demonstrated through an emerging demand for NIE consultancy services in the international market. NIE has built a strong brand presence in Abu Dhabi, working with the Abu Dhabi Education Council. NIE is also active in Qatar, Bahrain and Indonesia. In China and Vietnam, NIE collaborates with key provincial education bureaus and top universities, and regularly receives senior-level delegations from these countries.

Following NIE’s successful bid to provide consultancy to the United Arab Emirates (UAE) government on the feasibility of setting up a regional hub in the Middle East for teacher training and in-service teacher professional development, a consultancy entity known as ‘Knowledge Horizon’ (KH) was established in May 2003. The objective of KH is to promote NIE’s consultancy capabilities, both locally and internationally.

In order to offer programmes relevant to specific needs of school leaders from overseas, KH introduced the ‘LEP International’ programme, a six-month programme designed to prepare senior education officers for principalship. In August 2004, a customized LEP was also conducted for a group of participants from the Middle East. LEP International has since been marketed in Germany, Thailand, and Vietnam.

Building on the successful foundations laid by KH, a new programme office, the External Programmes Office (EPO) was established in 2005 to pursue the wider objectives of seeking, coordinating and managing all consultancy projects on behalf of NIE. It is anticipated that EPO will be transformed into NIE International Pte Ltd in due course.

2.5 Global Partnerships
As Asian universities attempt to internationalize their campuses, a new strand of professionalism is emerging amongst administrators and academics, and NIE is itself developing new competencies to broaden its reach. In recent years, NIE has formed external partnerships with universities in USA, UK, Germany, Australia, China, Hong Kong, Korea, Vietnam and Indonesia.

These partnerships have paved the way for research collaboration, staff and student exchanges and joint programmes for professional development and postgraduate research. Recently, the Institute of Education, University of London joined with NIE to offer a dual Doctor of Education (EdD) degree programme, which represents a major step forward in internationalizing NIE’s programmes. NIE enrolled its first EdD intake in August 2007.

New challenges have arisen in creating international exchange and overseas study programmes, attracting full-time international students, providing suitable study programmes for them, introducing new languages of instruction, and ensuring a beneficial study experience.
Experience elsewhere indicates that institutional collaboration often does not progress from written agreement to the realm of practice, and that relatively few collaborations survive beyond the project that funded them. In order to succeed in an increasingly competitive global education marketplace, NIE must address a range of challenges, including the following:

- Addressing differences in academic systems and cultures in support of internationalization initiatives, including the creation of an internationalized curriculum with the flexibility to achieve and sustain global relevance;
- Identification of, and compliance with, appropriate international standards and best practice;
- Campus internationalization – enhancing multicultural understanding for successful academic outcomes, and changing deep-rooted cultures in academia and society;
- Strike an appropriate balance between providing a public service, whilst responding to the undeniable realities of global market forces;
- Define and implement cost-effective international student recruitment strategies, including forecasting trends in student mobility;
- Secure additional external funding for international education, including an expanded role for corporate relationships with the private sector.

If NIE is able to successfully overcome these challenges and extend its global partnerships with high-quality partners with similar values and aims, NIE stands to reap significant institutional benefits over the duration of the 2007-2012 Strategic Plan. These include enhanced standards, diversity and recognition for NIE’s research programme, new opportunities for innovation in education, and enhanced opportunities to benchmark and share best practices.

From a national perspective too, global partnerships will build on Singapore’s unique strengths and extend national research through globally distributed collaborative programmes. Research capability and knowledge transfer will be further enhanced, promoting a culture which is globally relevant, responsive and competitive.

“NIE is at a crossroads, with its plans to develop the research agenda while simultaneously being well-placed for teacher preparation and development.”

Professor Marilyn Cochran-Smith, Lynch College of Education, Boston College

2.6 Policy Advice

An increasingly significant role for NIE is to offer expert advice to inform policy and practice. Given the context of Singapore’s educational history, its present structure and aims for the future, no off-the-shelf solutions to the enduring problems of pedagogical practice are available. Although research evidence and documentation of global best practice provide important benchmarks, nevertheless they offer guidance rather than templates for Singapore to emulate, i.e. Singapore education generally, and NIE specifically, will need to find its own solutions. The work of CRPP and LSL therefore carries strong relevance for policymakers. Such locally-grounded research offers a sound evidence-based foundation for curriculum design in teacher preparation, as well as a basis for policy advice and assistance to practitioners.

Both formal and informal channels play their part in establishing a close cooperative linkage between research and policymakers. NIE has so far provided MOE with important data on the linkages between classroom and student practices, socio-economic background and student achievement as a basis for policy decisions, and has also contributed to the MOE’s Mother Tongue Language Review and to the 2006 English Language Curriculum and Pedagogy Review. Informally, researchers meet with MOE officials on a regular basis to share and discuss research results.
2.7 Future Objectives – An Institute of Distinction

Since the 1999 corporate review and planning process, NIE has been working towards realizing its recommendations and laying the foundations for its next stage of development. In order to participate fully in a new and fast-evolving educational environment, new strategic approaches are called for, and the current strategic planning process will need to address the following issues in key aspects of NIE’s operation:

- **Capacity enhancement**: NIE will need to attract highly able and motivated faculty, students and support staff in order to attain a level of excellence parallel to that of top universities, whilst building on its teacher training mandate to secure continuing relevance to a knowledge-based society;

- **Curriculum redesign**: A new generation of programmes will be needed to produce teachers for a rapidly diversifying education system committed to equalizing opportunities and promoting engagement, innovation and enterprise. Particular importance will need to be given to more immersive and innovative use of ICT in teacher learning, both pre and in-service;

- **Educational research**: Identifying, developing, implementing and managing a strategically focused, scientifically rigorous NIE-wide programme of research, development and innovation that seeks to improve the quality of teaching and learning in Singapore schools and consolidate NIE’s recent emergence as a leading international research institution;

- **Governance and management**: NIE’s organization and management structures, and especially its human resources policies, reward systems and budgeting models, must align more closely with changing expectations of faculty and new global standards of organizational excellence and best practice.

The growth and transformation of the global education sector over the past decade, together with an increasingly competitive environment both locally and globally, will inevitably impose new and greater demands on NIE. Institutions with high international standing will naturally attract high-calibre faculty and students; thus in order to assume a leadership role as an “Institute of Distinction”, NIE must draw on its strengths in teaching and educational research, and continue to offer distinctive programmes that are highly regarded not only locally, but also by NIE’s international peers.

NIE has identified a number of parameters which help define NIE as an institution of distinction, and which therefore can help shape the strategic planning process and its subsequent implementation:

1. International recognition for excellence in teacher education and quality of academic programmes;
2. Visionary, people-oriented, open and effective management and leadership;
3. Highly qualified, competent and committed staff;
4. High quality and innovative teaching approaches;
5. Vibrant and multidisciplinary research environment that produces excellent international research publications and applications;
6. Quality graduates who excel and contribute significantly to society;
7. Warm and conducive working climate which maximizes staff potential, interaction and cooperation;
8. Continuing and enhanced relationship within NTU and with MOE, alumni, industry, international organizations and institutions.

2.8 Three Pillars of Success

In order to realize NIE’s vision as an Institute of Distinction, three overarching themes (pillars) guide NIE’s strategy for 2007-2012. These take into account the international educational landscape, national context, institutional setting and strategic imperatives listed above. The “three pillars” define broad institutional aspirations which encapsulate a range of more specific secondary objectives across the range of NIE’s operations. They thus act as reference points at operational level, so that the contribution of individual activities to each pillar can be evaluated, either qualitatively or quantitatively.

In order to succeed in transforming NIE as a responsive, relevant and internationally renowned institution of distinction, NIE must meet these three strategic goals. The three pillars and their relationship are shown schematically in Figure 2-2.
Pillar 1: Meeting stakeholder needs
First and foremost, NIE must meet the needs of its key stakeholders through the education of highly trained and motivated teachers, with the competence to prepare young Singaporeans for the challenges of the 21st century workplace.

In meeting the needs of its stakeholders, NIE has to ensure that both its initial teacher preparatory programmes and professional development courses keep pace with developments in the educational landscape, both locally and globally. Locally, NIE's major stakeholder and partner remains the Ministry of Education. While this ensures that NIE programmes and research remain locally anchored, they should also be internationally relevant.

Pillar 2: Achieving international recognition through educational research
The recent upgrading of NIE's research capability through the establishment of CRPP and LSL marks a recognition of the strong linkages between pedagogy and practice. NIE's teaching and research roles are synergistic, and excellence in teaching rests upon a foundation of relevant, high-calibre research. An appropriate balance between the two roles will therefore contribute to NIE's international standing.

Pillar 3: Impacting the international educational fraternity
The third goal will be to continue to respond to international opportunities to support other countries in the development of their educational institutions and to establish NIE as a preferred provider of educational services to the very highest international standards.
2.9. **Key Success Indicators**

With teaching as its core mandate, it is paramount that NIE’s programmes remain relevant to stakeholders’ needs. However, recognizing that educational research is set to play an increasingly important role, contributing to new pedagogies, informing policy and enhancing NIE’s international standing, NIE will need to strike an appropriate balance between teaching and research roles. Differentiated career pathways and reward systems that recognize the different academic capabilities and aspirations of teachers can be offered.

While both FPO and GPR offices have different missions to fulfil, these offices will need to work in tandem in providing a holistic pathway for education professionals from the time they enter NIE as student teachers till they retire from the profession.

In order to realize its vision as an Institute of Distinction, NIE’s programmes and research need to be relevant and responsive to the changing landscape and new global standards in the education sector. Being constantly responsive to the changing educational landscape will ensure that NIE’s programmes meet the needs of all its stakeholders globally as well as locally.

In terms of research, NIE will need to align with international practices and trends to ensure it maintains a cutting-edge research profile.
CHAPTER THREE

Towards 2012 – Programme Initiatives

3.1 Introduction
3.2 Teacher-centric Educational Programmes: A Holistic Continuum
3.3 Research
3.4 Strategy 1: Teaching – Key Initiatives
3.5 Strategy 2: Research – Key Initiatives
3.1. Introduction

NIE is the sole teacher training institute in Singapore and is affiliated to Nanyang Technological University. Its core mandate is to provide academic training for students to become effective beginning teachers in Singapore’s schools, and also to provide ongoing professional development and leadership training for in-service teachers. NIE also has an important role in educational research.

As of June 2007, NIE had 400 academic staff members organised into 11 academic groups. 71% of NIE academic staff hold PhDs, 24% are Master’s degree holders and 5% hold Bachelor’s degrees or professional qualifications. Some 16% of staff are expatriates. There are 352 non-teaching support staff and 123 research staff.
The current total enrolment at NIE is 5,610 full-time equivalent students, with a ratio of 69% female and 31% male. 27.3% of NIE’s students are teachers returning for professional development, 21.9% are diploma students, 15% are pursuing their basic degree, 27.8% postgraduate diploma, 6% Master’s programmes and 2% are doctorate students.

The major output of NIE are teachers who either enter the Singapore Education Service as new teachers after successfully completing one of several initial teacher preparation programmes, or serving teachers who have upgraded themselves through programmes conducted by NIE, either with or without certification. These two sets of programmes are developed and delivered by the Foundation Programmes Office (FPO) and the Graduate Programmes and Research Office (GPR), respectively.

In addressing the challenges presented in previous chapters, the Working Groups (See Appendix A. NIE Strategic Planning Taskforce and Working Groups) have proposed a range of strategic initiatives, each contributing to NIE’s overarching vision as an Institute of Distinction. The Working Groups were guided by a number of unifying threads, which are articulated as three operational strategies, addressing NIE’s primary roles in teaching and in research, along with the enabling organizational structures that support the effective functioning of these core roles. The three strategies cut across programme boundaries and present an opportunity for coherence in approach and implementation across the entire organization.

This cross-cutting approach underscores NIE’s holistic philosophy, whilst recognizing the potential contributions of each individual initiative towards NIE’s overall goals. This chapter outlines the operational strategies for (1) teaching and (2) research, including for each programme the key initiatives that will together deliver the projected outcomes of the Strategic Plan.
3.2. Teacher-Centric Educational Programmes: A Holistic Continuum

Current research on teacher education describes teacher-learning as a continuum, beginning at the pre-service ITP and continuing through to in-service TPD programmes. Embracing this view of teacher education and development, NIE believes in a holistic approach to serve the needs of the teaching profession in Singapore by providing learning opportunities that span the entire career of a teacher, at NIE, in schools, and throughout the educational community. Thus, in practice the two programme areas are treated as a continuum in their design and delivery.

Globalization, technology convergence, and the growing emphasis on creativity and innovation present new opportunities for addressing the initial training and ongoing professional development needs of Singapore’s teachers and graduate students. Catering to the learning needs of teachers at graduate level has twin benefits – it empowers them to be more effective teachers, and also addresses a need for personal satisfaction through acquisition of a higher degree. The latter is an especially potent tool for raising the self-esteem of individual teachers, as well as the image of the profession as a whole.

As NIE’s core mandate, pre- and in-service training for Singapore’s teachers will remain as the top institutional priority. Both ITP and TPD programmes will therefore need to accomplish substantial quantitative and qualitative changes in order to meet new demands and accomplish further integration. Both programmes will also need to find an appropriate balance between relevance to local needs and congruence with the national policy context, on the one hand, and the promotion of cultural diversity through responsiveness to the influences of globalization and market trends, on the other. Figure 3-1 below shows the current positioning of NIE’s teacher preparation programmes.

**FIGURE 3-1** Positioning of Teacher Preparation Programmes and Linkage to Professional Development via Postgraduate Degrees

![Diagram showing the positioning of teacher preparation programmes and linkage to professional development via postgraduate degrees.](image-url)
The efforts made in providing pathways for teachers’ professional development and in integrating evidence-based research into NIE’s programmes are noteworthy. Action research in the schools has created a culture of reflection and inquiry among teachers.

“Professor Linda Darling-Hammond, Stanford University School of Education IAP 2007

The ITP and TPD programmes benefit from the establishment at NIE of specialized in-house research capabilities (particularly CRPP and LSL). This presents NIE with a unique opportunity to inform and transform both programmes. Timeframes for translating original research into updated content and pedagogies can be significantly shortened; similarly, fast-evolving global best practice and new technologies can also be incorporated into the curriculum in a coherent and structured manner. Research also plays an essential role in monitoring the effectiveness and impact of ITP / TPD programmes on teacher performance. Such feedback will help in establishing synergies between ITP and TPD programmes, and maximizing cost-effectiveness and standards in terms of learning outcomes.

NIE’s research agenda must therefore be clearly defined and synchronized with the needs expressed by FP and GRP in order to realize these synergies and sustain continuing programme enhancement. Through such research-based improvements to the curriculum, and a holistic approach, NIE aims to achieve major improvements in standards of pre-and in-service teacher education to meet the future needs of Singapore’s teachers.

The close inter-relationship between ITP, TPD and the research agenda is illustrated in Figure 3-2.
3.3. **Research**

Further enhancement of NIE’s research efforts will make a crucial contribution to NIE’s teacher education efforts, locally and internationally. Thus NIE needs to define research goals to support an overall institutional profile that will secure a strategic niche for NIE and also achieve international recognition on par with premier universities globally.

To achieve this, NIE will need to prioritize and invest substantially in clearly agreed research domains, building on its track record and global standing in areas such as educational leadership, maths and science education, sports education, multi-literacy, and learning sciences to secure an unrivalled regional presence.

The task of coordinating and prioritizing across a broad diversity of research programmes will be undertaken through establishing a strategic research, development and innovation (RD&I) framework for NIE (Figure 3-3). Such a framework will provide guidance to faculty in aligning their specific research niches with the overall directions defined by the strategic framework.
“NIE’s research agenda, if successfully implemented, would have a great impact on the educational landscape in Singapore.”

Dr Robert Kozma,
Centre for Technology in Learning, SRI International
IAP 2007
Prioritization of key research issues will require consensus-building through broad consultation across the organization. For inter-disciplinary issues, it is likely that research centres such as CRPP and LSL could serve to coordinate groups of researchers in order to maintain efficiency (i.e., a centralized approach), whilst domain-specific priorities can be derived in a more decentralized manner where respective AGs take ownership. There will be a need for regular coordination between the Dean of Education Research and the respective Deans of Programmes in order to maintain synergies and monitor progress in relation to milestones set within the RD&I framework, as well as to NIE’s overall goals. Figure 3-4 describes the division of workload between AGs and research centres.
Principles for establishing norms for the relationship between AGs and research centres will be formulated, to serve as ground rules for constructive inter-departmental collaboration, and ensure clarity and transparency in priority-setting. The ground rules should include protected funding to enable the respective programme offices and AGs to conduct research that may not necessarily be of international interest, but which nevertheless may be essential to NIE’s internal goals. Wider publication of NIE’s academic research output will also be encouraged.

Building research capacity will require a sustained effort to recruit a strong cadre of internationally respected academics to NIE over the longer term. Besides requiring an aggressive recruitment strategy and the creation of an open, conducive research-friendly environment to facilitate research, NIE’s post-graduate programmes, where PhD and post-doctoral students undertake a large proportion of NIE’s research, will need to develop and expand further.

However, the heavy teaching workload of NIE’s academic staff means that creating more ‘research space’ without compromising teaching standards is likely to present a perennial challenge, and one which assumes even greater significance under the new NIE vision. Establishing an appropriate balance between these competing roles will require radical approaches. For example, innovative approaches such as self-directed learning, or more student-centred pedagogies can reduce the overall teaching burden (i.e. in line with the TLLM initiative). Programmes may also be re-designed to optimize modules, reduce content and emphasize creativity and meta-skills, as a means to create more space for research.

NIE’s research efforts are based on the current “teaching” capitation allocated for all AGs where all professorial track faculty need to be engaged in research. It is recommended that for AG-centric or domain-centric research efforts derived from the NIE strategic RD&I plan, this extended research space should be viewed as an avenue where the AG takes ownership and leadership in directing research efforts towards NIE’s goals.

The strategic RD&I framework will also incorporate a strong monitoring and evaluation component, and provide for ongoing assessment of the organizational structure for research, periodic self-assessments through portfolio reviews, audits of financial resources and potential development opportunities, regular evaluation of NIE’s core competencies and capacities, and an assessment of the effectiveness of NIE’s internal and external communication of research to its stakeholders. As a learning organization, these activities will allow NIE to continuously improve, recalibrate, and further realize NIE’s potential to implement its RD&I role on a wider international stage.

Research models need to be translated into pedagogical approaches for both teacher education and K-12 settings. It is imperative that the synergies between research and teaching are clearly visible and well-communicated. As a key outcome of monitoring and evaluation activities, the value of linkages between research and practice can be assessed, in order to recognize contributions made by faculty members who focus on diverse aspects of the field as in the proposed concept of differentiated tracks for research and teaching.

NIE’s research programme is funded mainly according to the MOE’s research capitation funding mechanism. Depending on funding allocations and the amounts needed for cross-cutting research across AGs, in the short term NIE will optimize its resources to meet competing demands for teaching and research. In the longer term, NIE will diversify its funding sources to reduce over-dependence on MOE’s research capitation and funding. Success in securing external funding for research is increasingly an important criterion and performance indicator for research. Such additional sources of funding will ultimately confer more autonomy in decision-making, and internally will enhance NIE’s flexibility in priority-setting.

The strategic initiatives for research address the issues raised above and will help ensure that research at NIE is elevated in its standards, broadened in its scope, and heightened in its relevance and impact on actual teaching practice.
## STRATEGIC INITIATIVES

### 1. INITIAL TEACHER PREPARATION (ITP)

<table>
<thead>
<tr>
<th>1.1.1 Strengthen international benchmarking through:</th>
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<tbody>
<tr>
<td>a) Conducting international benchmarking exercise.</td>
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<td>b) Developing best practices based on research evidence.</td>
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<tr>
<th>1.1.2 Sustain academic rigour by:</th>
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<tr>
<td>a) Consolidating existing QA practices into a holistic ITP quality assurance framework.</td>
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<tr>
<td>b) Linking evidence-based teacher education research to NIE’s programmes for continuing enhancement.</td>
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<tr>
<td>c) Providing platforms for staff to remain innovative and responsive to new and changing demands.</td>
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<tr>
<td>d) Enhancing coherence of theory-practice links.</td>
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<tr>
<td>e) Capitalizing on the strong content-pedagogy dual focus in curriculum.</td>
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<td>f) Attracting and producing high-calibre students and graduates.</td>
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<tr>
<th>1.1.3 Anticipate changing educational landscape by:</th>
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<tr>
<td>a) Enhancing the international exposure of student teachers.</td>
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<tr>
<td>b) Developing flexible academic and professional pathways.</td>
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<tr>
<td>c) Refining the curriculum.</td>
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<tr>
<td>d) Catalyzing a paradigm shift in ITP by cultivating independent learners via reflective practices and alternative learning paradigms.</td>
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| 1.1.4 Reiterative refinement of ITP programme based on research findings through refining and evaluating the curriculum. |

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<tr>
<th>1.1.5 Build NIE’s brand name and international recognition through its programmes by:</th>
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<tbody>
<tr>
<td>a) Establishing flexible pathways into programmes and enhance international appeal.</td>
</tr>
<tr>
<td>b) Internationalizing the PGDE.</td>
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<tr>
<td>c) Establishing the MTeach.</td>
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<tr>
<td>d) Improving efficiency of delivery modes for NIE programmes.</td>
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<tr>
<td>e) Marketing NIE programmes internationally.</td>
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<tr>
<td>f) Increasing number of scholarships available to overseas students.</td>
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<tr>
<td>g) Enhancing other support provided to international students.</td>
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<tr>
<td>h) Offering wider range of modules through External Programmes Office (EPO).</td>
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<tr>
<td>i) Conducting programme validation.</td>
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<tr>
<th>1.1.6 Position NIE to impact the educational fraternity internationally by:</th>
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<tbody>
<tr>
<td>a) Establishing new strategic partnerships or cooperative programmes with other teacher education institutions worldwide.</td>
</tr>
<tr>
<td>b) Building up the global alumni network.</td>
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</table>

### 2. TEACHER PROFESSIONAL DEVELOPMENT (TPD)

| 1.2.1 Position NIE as a premier destination for teachers and students pursuing higher degree programmes by implementing proactive mechanisms to ensure quality entrants for graduate programmes, and improve mode of delivery and types of courses. |
3.4. Strategy 1: Teaching – Key Initiatives

Establish NIE as a world-class provider of Teacher Learning Programmes, transforming NIE into a vibrant multi-cultural institution, serving the needs of educators in Singapore and internationally.

STRATEGIC INITIATIVES

1.2.2 Strengthen and leverage NIE’s position as the first to provide innovative leadership development programmes to educational leaders in Singapore and internationally by:
   a) Developing new paradigms for school leadership in globalized education.
   b) Infusing future teacher leaders with new skills and mindsets.
   c) Enhancing quality of leadership programmes.
   d) Leveraging on recognized institutes of excellence.

1.2.3 Strengthen NIE’s position as a major provider of professional development programmes for educators and professionals by:
   a) Focusing on a smaller number of targeted, stand-alone short courses.
   b) Ensuring relevant learning by teachers in TPD to equip them as teacher-researchers in the school system.
   c) Developing and launching a Teacher Professional Development in Education Unit (TPDEU) to focus and integrate activities.

1.2.4 Expand NIE’s role as a leading provider of TPD programmes for international educators and professionals by providing a flexible, yet focused portfolio of options to encourage more educators to participate.

1.2.5 Establish strong links with the international educational fraternity by:
   a) Expanding NIE’s sphere of cooperation through joint course offerings.
   b) Leveraging on the growing NIE alumni in creating linkages with international institutions.

1.2.6 Develop mechanisms to customise TPD courses tailored to the needs of the international market.

1.3.1 Enhance the quality, excellence and relevance of the ITP programmes through evidence-based research by:
   a) Reviewing and conducting meta-analyses of past studies on teacher education.
   b) Identifying key areas of research and developing a research framework that will inform and transform the ITP programmes.
   c) Establishing international partnerships in research endeavours.
   d) Providing platforms to share research findings with NIE staff and programme offices.

1.3.2 Enhance NIE’s local and international presence and credibility in educational research by informing and impacting educational initiatives and directions.

1.3.3 Establish clear links between TPD programming, actual teacher skills and performance, and professional development modes by:
   a) Implementing evidence-based design and delivery of in-service short courses and leadership programmes.
   b) Ensuring research portfolio remains responsive to changing needs.
   c) Conducting modelling to evaluate responsiveness to changing needs.

1.3.4 Establish clear research evidence on impact of leadership development on school improvement and system impact through research in quality aspects of leadership and other TPD programmes.

3. RESEARCH
### 3.4. Strategy 1: Teaching – Key Initiatives

#### Establish NIE as a world-class provider of Teacher Learning Programmes, transforming NIE into a vibrant multi-cultural institution, serving the needs of educators in Singapore and internationally.

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<th>STRATEGIC INITIATIVES</th>
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<tr>
<td><strong>4. HUMAN CAPACITY</strong></td>
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| 1.4.1 Strengthen NIE’s position as a major provider for professional development programmes for educators and professional by:  
  a) Expanding the pool of resource experts for short courses.  
  b) Enhancing staff capacity. |
| **6. ICT** |
| 1.6.1 Upgrade NIE’s ICT infrastructure network to enable fast access to local and digital resources including e-learning materials, video streaming, NIE’s library digital resources and web-based resources.  
  1.6.2 Provide support for design, development, delivery and facilitating of e-learning through NIE’s adopted Learning Management System.  
  1.6.3 Provide up-to-date computing resources and facilities for academic staff so that they can conduct their teaching in local and international environments.  
  1.6.4 Build up local and international library resources to support teaching and learning in and out of Yunnan campus, including e-learning.  
  1.6.5 Strengthening e-learning /IDM culture to maintain cutting-edge presence in the changing educational landscape. |
| **7. PHYSICAL** |
| 1.7.1 Develop a responsive mechanism to increase venue options for in-service course delivery. |
The IAP was supportive of Strategy 1 and its contributions to establishing NIE as an Institute of Distinction which provides world-class teacher education programmes.

**A HOLISTIC CONTINUUM**
The IAP endorsed the holistic continuum model and all the initiatives proposed, and commended NIE for this innovative framework which integrates pre-service teacher preparation and in-service teacher professional development. The panel noted that the continuum model would help to build up a quality teaching force that can continually keep up with new knowledge and pedagogical skills and is in alignment with the three career pathways of teachers in the schools, namely the Leadership, Teaching and Specialist tracks. The panel also supported the three new programmes: the Doctor of Education (Ed.D), which has admitted its first intake in August 2007, the Bachelor of Education (B Ed) and the Master in Teaching (MTeach).

**EVIDENCE-BASED PEDAGOGY**
The other key initiative in Teaching is the introduction of evidence-based pedagogy, which the IAP supported. The panel recognized that in translating and propagating evidence-based innovative practices within education, it is necessary to both equip the student teachers with these practices and to ensure that the schools are receptive to them through engaging the school leaderships in NIE’s executive programmes. The panel also affirmed the importance of ‘action research’ and the role of ‘research activists’ to further the professionalism amongst teachers in schools and considered this an important component of developing local evidence-based practices and a culture of inquiry and reflection. The IAP encouraged NIE to strengthen its support for and collaboration in school-based action research.

**TEACHER PROFESSIONAL DEVELOPMENT**
The panel recognized that Singapore’s geographical location and the multi-cultural aspects of its society gives NIE several strategic competitive advantages in its efforts to provide innovative leadership development programmes to educational leaders internationally. Its evidence-based pedagogical work could be of benefit to other nations. The panel further suggested bringing overseas participants to NIE’s Teacher Professional Development programmes to experience the action research process and the development of evidence-based practices in the schools, and to invite overseas teachers to attend conferences in Singapore.
### 3.5. Strategy 2: Research – Key Initiatives

<table>
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<tr>
<th>STRATEGIC INITIATIVES</th>
<th>2.1.1 Keep abreast with international developments in teacher education in order to benchmark, inform and refine NIE’s own ITP programmes and maintain relevance.</th>
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<tr>
<td><strong>1. INITIAL TEACHER PREPARATION (ITP)</strong></td>
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<td><strong>2. STRATEGIC INITIATIVES</strong></td>
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</table>
| **3. RESEARCH** | 2.3.1 Design and implement an NIE-wide, integrated strategic Research, Development & Innovation (RD&I) programme.  
2.3.2 Develop appropriate communication and reporting mechanisms that facilitate the translation of RD&I findings into usable policy briefs as well as guidance and models for practitioners.  
2.3.3 Develop and implement an effective intellectual property and resource plan.  
2.3.4 Prioritize research to align with and inform key areas of national importance and/or comparative advantage.  
2.3.5 Increase and diversify sources of research funding.  
2.3.6 Actively support development of a strong research culture by:  
a) Reviewing international norms in research related matters in top research universities and realign NIE’s administrative and academic norms to these benchmarks.  
b) Encouraging and supporting participation in research activity and publication.  
2.3.7 Benchmark NIE research output and standing against leading educational research universities around the world.  
2.3.8 Host international research conferences in educational research.  
2.3.9 Achieve high international distinction in educational research, development and innovation by:  
a) Increasing number of publications in refereed journals.  
b) Encouraging presentation of papers and keynote addresses at international research conferences.  
c) Expanding CRPP’s Publication Unit and broaden its scope to NIE as a whole.  
d) Building up the international reputation of NIE journals.  
2.3.10 Expand Masters and PhD programmes and increase availability of PhD scholarships.  
2.3.11 Develop a rigorous PhD programme with a strong course-based component focused on the development of disciplinary and methodological understanding and skills, combined with high quality supervision. |
| **4. HUMAN CAPACITY** | 2.4.1 Build a pool of Research Fellows to provide intellectual leadership for NIE’s research initiatives. |
### 2.4.2 Develop and implement a strategically focused research capacity building programme by:

- a) Appointing distinguished researchers in high priority RD&I areas to help lead research programmes, expand the funding base, enhance international visibility, mentor junior faculty and undertake supervision.
- b) Reducing staff teaching loads by hiring or seconding dedicated teaching staff from MOE and redesigning pre-service education programme to reduce aggregate teaching loads and create greater research opportunities.
- c) Providing and supporting active research mentoring of junior staff.
- d) Developing and supporting a post-doc Junior Research Fellows programme for promising young researchers.
- e) Developing and supporting Senior Research Fellowship programme for distinguished international researchers.
- f) Providing research release time for research active APs to engage in sufficient research to qualify for full Professor status.
- g) Developing expanded career pathways for non-academic research workers.

### 2.4.3 Support academic staff attendance at international research conferences.

### 2.4.4 Establish an academic staff profile of full Professors or APs to provide leadership to high potential junior faculty. The staff profile should include staff whose primary role and expertise is teaching.

### 2.5.1 Design and implement an effective NIE-wide research management structure by:

- a) Appointing Dean of Education Research.
- b) Establishing a Research Committee at NIE.
- c) Developing and supporting a NIE-wide Research Advisory Committee to facilitate consultation between Deans, AGs and research centres.
- d) Appointing senior researchers to lead prioritized areas of research.
- e) Establishing an International Research Advisory Panel to evaluate research practices, productivity and norms every 3 years.
- f) Grant heads of centres and research programmes increased financial autonomy within an overall framework of fiduciary oversight and responsibility.

### 5. GOVERNANCE & MANAGEMENT

#### 2.5.1 Design and implement an effective NIE-wide research management structure by:

- a) Appointing Dean of Education Research.
- b) Establishing a Research Committee at NIE.
- c) Developing and supporting a NIE-wide Research Advisory Committee to facilitate consultation between Deans, AGs and research centres.
- d) Appointing senior researchers to lead prioritized areas of research.
- e) Establishing an International Research Advisory Panel to evaluate research practices, productivity and norms every 3 years.
- f) Grant heads of centres and research programmes increased financial autonomy within an overall framework of fiduciary oversight and responsibility.

### 6. ICT

#### 2.6.1 Create a Research Data Centre to house research servers. The data centre will have facilities for secured transactions, uninterrupted power supply, data backup, cooling facilities and the latest IT security systems.

#### 2.6.2 Create a major intranet and internet network to support collaboration between NIE and other international and local universities and research centres.

#### 2.6.3 Provide support for reference materials through subscription of relevant and new electronic databases and e-journals through NIE and NTU Library systems.

#### 2.6.4 Outsource content development work for multimedia and e-learning modes to free up staff time for research and other scholarly activities.
The IAP endorsed the NIE-wide integrated strategic RD&I programme and noted its alignment with MOE policies and how it is designed to enhance the quality of teaching and learning in Singapore schools. The panel supported this approach as findings from research initiatives would result in effective contributions to the development of education.

**RESEARCH MANAGEMENT**

The IAP sounded a strong note of approval for the integrated whole-of-NIE approach to research planning, development, management and reporting. The panel supported the research management structure and the appointment of a senior faculty person to the position of Dean of Educational Research to coordinate and manage the NIE-wide research programmes. The panel also agreed on the importance of expanding the number of senior research faculty appointments to support the development and management of the research programme and supervising PhD students.

**PHD PROGRAMME**

The IAP indicated its support for a strong PhD programme with well-developed methodological and theoretical courses.

**Multi-Track Funding Model**

The IAP recommended that apart from funding for strategic research priorities, there was also long-term value in supporting a separate funding track for 'bottom-up' research that will have impact on future innovation.
CHAPTER FOUR

Towards 2012 – Success Enablers

4.1 Introduction
4.2 Human Capacity Building
4.3 Physical Infrastructure
4.4 ICT
4.5 Resourcing for the Strategic Plan
4.6 Governance and Management
4.7 Strategy 3: Enabling Corporate Support – Key Initiatives
Towards 2012 – Success Enablers

4.1 Introduction

In implementing the operational strategies for the two core programmes for teaching and research, NIE will need to organize and structure its resources, capacities, and core competencies in a coherent, rational and transparent manner in order to satisfy its goals and meet the needs of its stakeholders. Implementation needs to be closely synchronized, ensuring that together the strategies effectively contribute to and are informed by the educational knowledge base, help move research quickly into the hands of educators and key stakeholders, and use research-based strategies, tools, and processes to build capacity.

This chapter provides an overview of the supporting organizational framework, including human capacity, physical and ICT infrastructure, governance and management, which underpin and facilitate the smooth functioning of Strategies 1 (Teaching) and 2 (Research).
An appropriate balance among teaching, research and services at NIE will allow academic staff members to follow their interests and perform according to their individual strengths and help realize NIE’s multiple institutional objectives. The overall employment framework will therefore need to allow flexibility between the three roles, aiming particularly to achieve an equitable balance of workload, ensure comparable reward and compensation regimes irrespective of the choice of specialization, and offer clear career paths for academic staff.

In an international context, organizational management, human resource policies, communication, marketing and good governance are just as vital to an institution’s standing as its academic accomplishments and physical facilities. NIE will need to set and achieve very high standards in all these domains in order to achieve its goal as a true Institute of Distinction.

Thus NIE’s corporate support structure will need to exhibit flexibility and greater autonomy in decision-making. Parameters such as transparency, accountability, and responsiveness will also be key to future success and recognition in the wider educational fraternity.

In summary, given NIE’s holistic and cross-disciplinary philosophy, NIE needs a visionary corporate support structure that strongly facilitates inter-departmental and inter-programme cooperation. The strategic initiatives relating to NIE’s corporate support structures, including human resource management, governance, management and infrastructure, will enable the realization of inherent synergies through seamless integration of programme components.
4.2 Human Capacity Building

Recognizing the need to expand the opportunities available to academic staff to engage in research, it is proposed to establish a pool of academic staff whose primary role and expertise is in teaching. Many of these could be recruited as teacher secondments from MOE. In terms of personal professional development, such a period of secondment in an academic environment should be viewed as an important developmental period in teacher career paths.

Thus strategic initiatives in this area include the establishment of differentiated tracks for teaching, research and services, recruiting of staff dedicated specifically to teaching, and a differentiated workload ratio for teaching, research and services.

At present academic staff salaries at NIE lag behind those of NTU by about 10% to 20% for Assistant and Associate Professors. Since competitive salaries will be an essential prerequisite to recruit and retain the high calibre of academic staff needed by NIE, a review and benchmarking of compensation packages will aim to achieve closer parity both in relation to NTU, and to other professions.

Staff development strategy for this planning period will be centred on effective and efficient development of junior staff in the skills and knowledge of their job demands, with the aim of achieving a high calibre academic staff profile, with low staff turnover. Both teaching and research skills are key, as well as a familiarity with preparation of research grant proposals. Different channels and modes of staff development will include peer mentoring, team teaching, professional and technical guidance. All these share a common goal to foster a climate where staff members see self development as critical to personal as well as organizational success.

The projected enrolment by 2012 is 7800 FTEs of which about 380 FTEs will be non-MOE sponsored students. Based on this projection, by 2012 NIE’s anticipated total staff strength will reach 1038, including 540 academic staff and 498 non-academic staff.
4.3 Physical infrastructure

4.3.1 Current Status

NIE’s facilities are located at the 16 ha Yunnan Garden Campus (YGC) of Nanyang Technological University. YGC was originally designed in the mid-1990’s for a capacity of 4,500 FTE students. Since moving to the present site at the end of 2000, NIE has completed several additional construction projects to increase usable space, and now caters, for an annual enrolment of around 5,500 students.

The YGC complex hosts a variety of facilities equipped with the latest technologies. NIE has one of the best-stocked educational libraries in the region, an art gallery, the Nanyang Playhouse and up-to-date research laboratories, including the award-winning aeroponics greenhouse. Sports facilities have also been provided to meet the teaching and recreational needs of the trainee teachers and residents of the Halls.

According to projections for the 2011/12 planning period, total projected enrolment in NIE programmes is anticipated at approximately 7,800 FTE per annum, of which around 57% will be in ITP programmes for student teachers recruited by MOE, 39% in TPD programmes for in-service teachers and the remaining 4% will be non-MOE sponsored students. If this projected enrolment number is attained, it will represent a 34% increase over the current (AY2006/07) student population. These projections ultimately call for significant further expansion of physical space from current levels.

To some extent the current pressure on NIE’s physical facilities is alleviated by the use of satellite campuses. For several years, NIE had a satellite campus in Margaret Drive (Townsville Campus) which was used mainly for the Special Training Programme for Mother Tongue teachers, some in-service training courses and some parts of the Diploma in Departmental Management programme. The lease on the Townsville Campus has since been relinquished and the site returned to the Singapore Land Authority.
In its place, NIE recently leased an entire floor of NTU’s OneNorth building in North Buona Vista Road for conducting in-service professional upgrading courses for teachers. MOE is also considering redevelopment of the former Teachers’ Network at Grange Road into a Teachers’ Development Centre. Delivery of NIE’s training programmes via satellite campuses has several attractions, particularly for in-service teachers who find the satellite campuses more conveniently located than the main campus. The GPR Office is also actively pursuing the idea of delivering courses at school or cluster level.

NIE has a total of 359 teaching and subject rooms, of which 235 are under the charge of the academic groups. These include laboratories, art and music studios, sports facilities and rooms that house special equipments or curriculum materials. There are 12 lecture theatres and 75 tutorial rooms for teaching purposes. The remainder are computer laboratories and meeting rooms used by staff and students.

### 4.3.2 Challenges for Infrastructure

In meeting the projected physical infrastructure needs for ITP, TPD and research over the 2007-2012 Strategic Plan period, the following challenges are evident:

- The site occupied by NIE is bounded on all sides by roads within the YGC (Nanyang Crescent and Nanyang Walk). It is therefore unlikely that the total site area can be further expanded as this would encroach upon land occupied by the rest of the University.
- Ministry of Defence restrictions on building height in the vicinity impose a non-negotiable limit on the physical space available for expansion within the NIE site. It is estimated that this limit is approximately 15% to 20% of the built-up gross floor area (GFA) of NIE’s current physical infrastructure, which now stands at 65,219 m². The implication of this is that to cater for the increase in FTE, construction of additional GFA must be supplemented by innovative approaches to the delivery of NIE’s programmes.

“NIE needs a diverse staff profile of professors, researchers and practice-oriented teaching staff, who are mainly experienced staff educators... There is a need to develop career paths to attract these senior educationists, who are currently seconded to NIE from the Ministry of Education. It’s no point in them coming in for two to three years and we don’t take advantage of what they can impart.’

_Professor Cham Tao Soon, Former President Nanyang Technological University Chairman, IAP 2007_
4.4 ICT

4.4.1 ICT – current status
The current ICT infrastructure – network, computer systems, servers, audio-visual equipment – was installed seven years ago and is now in need of replacement and expansion. Wireless coverage in particular is incomplete and insufficiently reliable, although internet bandwidth is currently sufficient to meet the current needs of both students and staff. In future this will certainly change, due to the increasing bandwidth requirements of IDM, the demands for specialized ICT and bandwidth to support collaborative research with institutes around the world, and the increasing demand for video streaming of content.

At present NIE maintains licences for more than 150 software applications, based on 2003 operating system software.

4.4.2 Challenges for ICT
The demands on ICT resources at NIE are increasing not only quantitatively in line with increasing student and staff numbers. They are also changing qualitatively, in tandem with new teaching and learning paradigms. The key ICT challenges are listed as follows:

- ICT support staff: increasing demand for e-learning development and deployment places heavy demands on ICT staff resources. Current staffing levels are already inadequate to support e-learning servers on a 24/7 basis. Additional resources for LMS and ICT tools for teaching will undoubtedly be required in the future, along with additional staff including multimedia designers and programmers, instructional designers and educational technologists. Unfortunately NIE must compete with industry for ICT staff, and so recruitment is a challenge.
- Security: as usage increases, so does the security threat. Maintaining tight security with firewalls will present an ongoing challenge, requiring new restrictions on access and limitations on approved software. Allied to this is the need to maintain a large range of software applications, which in turn require periodic hardware upgrades to maintain functionality.
- Off-campus support: there is a need to provide ICT support for teaching at satellite campuses.
- MIS: NIE’s management information systems have been designed to accomplish specific tasks at different times, and are not well integrated with the NTU system. Internal systems such as student systems are also not integrated to facilitate access to management information. To a limited extent this is being addressed through an ongoing process to develop an integrated database for use by the FP and GPR offices.
4.5 Resourcing for the Strategic Plan

NIE’s autonomous position within NTU derives in part from the differentiated budget line item received from MOE each year.

In 2006, the operating budget grant to NIE was S$97.8 million. This is anticipated to grow at 6% to 8% during the period 2007-2012, subject to the usual caveats associated with the general performance of the economy and the Government’s priorities. NIE estimates that with the projected student enrolment in this Strategic Plan based on estimates derived from bilateral discussions with MOE, and current capitation, the budget will support 986 staff positions by 2012 and the corresponding improvements in infrastructure and facilities.

As we embark on an increasing number of programmes that are jointly offered with our partners, we will be applying the principles of full cost recovery to ensure that these ventures are all financially viable.

Up till March 2007, CRPP has been funded on a special MOE allocation of S$48 million for five years. NIE has in consultation with MOE, proposed a renewal of financial support for another five years for the new, comprehensive RD&I Programme outlined in this Strategic Plan. This proposal is for educational research. Research funding for specific content areas and in the areas of IDM can be sourced through competitive bidding from external sources such as NTU’s Academic Research Fund, A*STAR and the National Research Fund (NRF).

Two developments will further enhance our financial positioning to deliver better services to our stakeholders. Firstly, with the expected realization of the entity called NIE International, consulting services are anticipated to add a substantial amount to our annual operating revenues and our ability to offer scholarships and initiate new projects. Secondly, our fund raising efforts with alumni and foundations are anticipated to result in increased support for restricted activities such as scholarships or infrastructure improvement.
4.6 Governance and management

4.6.1 Introduction

NIE’s standing as an autonomous institute within NTU is enshrined in NIE’s Charter, adopted after NTU’s corporatization in 2006. The Charter provides for establishment of an NIE Council and the appointment of a Director. It also lays down the powers of the Council and the responsibilities and accountability of the Director. It further describes some facets of NIE’s accountability to the University and the areas in which it must conform with NTU policies.

As an autonomous institute, NIE has to be governed effectively and transparently in compliance with international best practices. The governance systems and structures in place must ensure management accountability whilst allowing adequate flexibility for effective decision making. It also must facilitate optimal allocation of available resources to enable NIE to meet its strategic goals.

4.6.2 Current governance and organizational structures

In 2000, a revised organisational structure was introduced, based on a matrix model. Instead of being organised by faculty/schools, NIE today is programme-driven. NIE’s four major thrusts under the new structure are FPO, GPR, ACIS, and CPD. NIE’s current and future organizational structures are shown in Figure 4-1 and Figure 4-2, respectively.

Deans have been appointed for FPO, GPR and Research. Academic Computing and Information Services (ACIS) and Corporate Planning and Development are headed by Divisional Directors. The teaching staff is organised into 11 academic groups (AGs), each reflecting a major area of study (which may be inter or multi-disciplinary in scope). A Head was appointed for each AG and the Dean (Academic) oversees the operation of all AGs.

The new structure marked a radical and significant departure from the traditional organization of institutions of higher learning which are typically based on faculties or schools, each focusing on a discrete set of disciplines. For NIE, the reasons for moving away from the traditional structure lay in the need to foster inter-disciplinary teaching and research, reflecting the cross-disciplinary nature of all NIE’s teacher education programmes.

Steering this matrix structure is an overarching governance framework (Figure 4-3) which places the prime responsibility for policy, strategy and decision-making on three committees, listed below and ranked by degree of authority:

1) NIE Council
2) NIE Executive Committee (ExCo)
3) Director’s Strategic Review & Development Meeting (DSM).
Towards 2012 – Success Enablers

The NIE Council’s membership is mostly external, with representation from the MOE, the universities, other public sector organizations and the private sector. The ExCo represents a sub-set of Council members who meet more frequently. The DSM consists of the Director, Deans and Divisional Directors, comprising the senior management of NIE. Together, these committees play the primary role of governing NIE in terms of environmental scanning, strategy formulation, organizational decisions and delegation to management for implementation. NIE’s brand equity (NIE and its certifications), resources, business products (programmes and courses) and general interests are protected through these three committees.

As a tertiary teacher education institute, NIE must maintain stringent academic governance of its programmes and their delivery in order to protect NIE’s brand equity. To ensure its standards are met, NIE has established additional committees and sub-committees which address broad areas of governance and management. Currently the NIE Board of Studies (BOS) acts as the main board, approving and deciding on academic matters pertaining to NIE’s programmes before final endorsement by NTU. Also, the Board of Examiners for ITP/TPD programmes performs the downstream function of approving examination results and academic awards to graduates.

In addition to the main corporate and academic governance committees cited above, other steering, management and working committees have been established at the Programme Office and administrative unit levels. These bodies exercise control and decision making functions at the working level, within their respective areas of responsibility.

The committees are categorized according to five broad areas of governance as follows:

- Corporate governance
- Academic governance
- Research governance
- Financial governance
- Resource governance

Such a classification provides a useful framework for analyzing committee functions and responsibilities and for identifying gaps in the governance framework within NIE that may require filling.

4.6.3 Challenges in governance and management

NIE is positioned as an autonomous institute within NTU, with MOE as the principal source of both funding and policy guidance. The three institutions enjoy a strong tripartite relationship, which enables synergies to be realized in meeting Singapore’s needs for teacher education.

Inevitably, the planned increases in the teaching workforce, as well as growing demand for support and consultancy from overseas, will together impose increasing strains on NIE’s resources in all programme areas. In turn this will present further challenges to NIE in terms of its management of human and physical resources, and its flexibility to accommodate growth. In this respect there is concern that the increasing demand for teachers will erode quality time available for academic staff to engage in quality research.

It is anticipated that to achieve this necessary institutional agility, NIE will need a greater degree of autonomy to manage its own administrative and programmatic issues, especially in areas where flexibility from NTU policies can be justified by differences in institutional culture, staff recognition for differentiated workloads, or compensation levels.

Aside from governance issues relating to NIE’s relationship with NTU, internal governance within NIE also presents challenges in light of the changing external landscape, market demands and organizational paradigms. Certainly, the effectiveness and fitness for purpose of the current complex governance structures are likely to be tested in the coming years. There have already been calls to merge some committees and streamline the system to improve efficiency and speed up decision-making processes. It is also noted that there is at present no governance committee overseeing external affairs.
Towards an Institute of Distinction

The current inactive status of the NIE Establishment Committee is also a matter of concern with regards to ensuring effective governance at NIE.

Up until 2003, its role and function included approval of salary increments, contract renewals and tenure awards for NIE academic staff as well as promotions for academic and senior administrative support staff. It was chaired by the Chairman of the NIE Council, with selected Council members and the NIE Director represented. The reinstatement of the Establishment Committee now assumes growing importance in the context of the measures needed for NIE to exercise a greater degree of flexibility from the University’s administrative policies.

In order to make recommendations to address these challenges and other aspects of NIE governance, the NIE Council appointed a Steering Committee in 2006 to consider the factors crucial to enabling NIE to enhance its status as an Institute of Distinction. The Committee was chaired by Prof Tan Eng Chye of NUS, a member of the NIE Council. The Steering Committee’s detailed recommendations will provide important guidance in ensuring that NIE’s overall governance structure remains relevant and responsive, and provides an enabling framework for the institute to excel in all aspects of its operations. This Strategic Plan will take cognizance of the Steering Committee’s recommendations and integrate its findings.
FIGURE 4-1  Current Organizational Structure
FIGURE 4-2  Future Organizational Structure for NIE
The Academic Governance Committees within NIE oversee the academic affairs of the Institute. However, NTU exercises authority over the Institute’s undergraduate and postgraduate degrees and postgraduate diploma programmes in accordance with the University’s prevailing academic governance procedures.
### STRATEGIC INITIATIVES

#### 1. INITIAL TEACHER PREPARATION (ITP)

| 3.1.1 | Consider extended teaching hours in anticipation of the increase in student enrolment and in view of the limitations to the expansion plans of the NIE campus. |

#### 2. TEACHER PROFESSIONAL DEVELOPMENT (TPD)

| 3.2.1 | Deliver courses at cluster level in view of the space constraints at the NIE campus. |

#### 3. RESEARCH

| 3.3.1 | Design and develop an effective NIE-wide administrative support system for research by:  
  a) Reviewing administrative processes to reduce paperwork.  
  b) Providing expert editorial support for academic faculty on an as needed basis. |

#### 4. HUMAN CAPACITY

| 3.4.1 | Staff workload  
  a) Implement a workload allocation practice of assigning differentiated workload to take into account individual relative strengths in teaching, research and administration on which performance appraisal will be based.  
  b) Streamline NIE’s administrative support processes to improve workflow (including MIS) so that the culture of research, innovation and enterprise can flourish.  
  3.4.2 | Staff recruitment and profile  
  a) Review NIE website content and align communication strategy with recruitment objectives.  
  b) Allocate budget for advertising faculty vacancies in prestigious journals.  
  c) Provide flexibility to cover travel costs for candidates to fly in for interviews as necessary.  
  d) Encourage AG Heads to search for potential candidates during international conferences and provide accompanying financial support for related expenses.  
  e) Encourage NIE staff travelling overseas to identify candidates to join NIE.  
  f) Continue with and review the terms and conditions for Overseas Graduate Scholarships (OGS).  
  3.4.3 | Staff development  
  a) Make available different channels and modes for staff development including peer mentoring, team teaching, professional and technical guidance.  
  b) Provide equal promotion prospects for academic staff who excel in research, teaching or administration.  
  c) Provide alternative career paths for research associates and assistants who are not on the academic track.  
  3.4.4 | Staff compensation and rewards  
  a) Compensate and reward work performance, taking into account the circumstances of workload assigned.  
  b) Raise staff salaries as necessary and appropriate to increase competitiveness and to match responsibilities. |

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**4.7. Strategy 3: Enabling Corporate Support – Key Initiatives**

Introduce a proactive and enabling corporate support that anticipates NIE’s future needs in organizational management, governance, physical infrastructure and ICT, and incorporates an employment framework that allows flexibility between teaching and research roles, assigning each with an equitable value in performance assessments.
4.7. **Strategy 3: Enabling Corporate Support – Key Initiatives**

**STRATEGIC INITIATIVES**

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<tr>
<th>3.4.5 Performance management:</th>
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<tbody>
<tr>
<td>a) Empower Heads of AGs and administrative units with more authority for management decisions.</td>
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<tr>
<td>b) Implement a NIE-centric Appointment, Promotion and Tenure (APT) framework, closely aligned to NIE’s strategic goals.</td>
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**5. GOVERNANCE & MANAGEMENT**

| 3.5.1 Reinstate the NIE Establishment Committee to be chaired by the NIE Council Chair. |
| 3.5.2 Review current committee structures. |
| 3.5.3 Review and adapt the current organizational structure to ensure its continuing relevance and effectiveness. |
| 3.5.4 Consider establishing a governance committee to oversee maintenance and management of external relations. |

**6. ICT**

| 3.6.1 Create a more customer-centric environment by building and integrating more HR, finance and corporate services for staff. |
| 3.6.2 Develop integrated student database with a set of common applications for all programmes, allowing administrators to access and update relevant data seamlessly. |
| 3.6.3 Continue replacement of teaching and administrative equipment based on equipment life-cycles. |
| 3.6.4 Develop common portal for trainee teachers, in-service teachers, graduate students and alumni to allow access to NIE’s programmes and content. |
| 3.6.5 Provide technology support for YGC by: |
| a) Increasing capacity of network to cater for increased traffic, and increase internet bandwidth progressively. |
| b) Implementing a planned replacement programme for laptops and PCs to maintain functionality. |
| c) Aligning academic and research needs of technology so that resources can be fully utilised. |
| d) Consolidating and reviewing application software developed by NIE to streamline processes. |
| 3.6.6 Provide ICT support for teaching in satellite campus by upgrading the video-on-demand system to enhance quality and speed within campus and at satellite campus. |
| 3.6.7 Provide support and facilities for online teaching within Singapore and also for international programmes by having more hardware and software resources and support personnel to meet increasing demand for e-learning. |
4.7. **Strategy 3: Enabling Corporate Support – Key Initiatives**

**STRATEGIC INITIATIVES**

- **3.6.8** Provide technology services to FP, GPR and EP programmes for seamless integration of data for effective administration by building an integrated student database to allow easy retrieval and updating of student information across applications.

- **3.6.9** Support international collaboration and international research by providing more security zones to host advanced research projects’ servers without affecting network security.

**7. PHYSICAL INFRASTRUCTURE**

- **3.7.1** Expansion of NIE campus to cater to a full-time equivalent (FTE) of 7,800.

- **3.7.2** Use of satellite campus e.g. MOE’s Teacher Development Centre (TDC).
GOVERNANCE AND MANAGEMENT
The IAP noted that while NIE is part of NTU, the nature of its teacher education programmes makes it different from other schools of NTU in terms of:

- How academic courses are delivered and administered
- The nature of work required of staff which is highly practice-oriented and school-based
- The teaching and supervision workload

The IAP commented that while NIE should continue its academic governance in line with NTU’s to maintain academic rigour and standard of its programmes, some room for flexibility was needed to meet NIE’s specific administrative and human resource requirements.

HUMAN CAPACITY BUILDING
The IAP noted that for NIE to meet its teacher education goals, it would need a diverse staff profile of professors, researchers and practice-oriented teaching staff who are mainly experienced educators from the schools. To retain talent and build expertise, particularly in programmes with strong theory-practice links, different career pathways would have to be developed to accommodate the different profiles of staff.

The IAP also recognized the need to reward staff adequately through competitive salaries and promotions. The panel noted that currently NIE staff are rewarded and compensated according to guidelines set by NTU. The IAP was of the view that NIE could have some degree of flexibility within the guidelines set by NTU, to reward and compensate staff according to its own customized performance criteria for quality and excellence.
INSTITUTE OF DISTINCTION

Strategy 1
Establish NIE as a world-class provider of teacher learning programmes, transforming NIE into a vibrant multi-cultural institution, serving the needs of educators in Singapore and internationally.

- Strengthen a holistic teacher-centric continuum, integrating pre- and in-service professional development
- Introduce evidence-based curricula, informed by research
- Strengthen internationally benchmarked standards of excellence
- Pioneer new ICT-enabled pedagogies
- Establish NIE as a premier provider for professional development programmes for educators and professionals
- Deliver top quality globalized education in a vibrant, multi-cultural setting
- Play a lead role in international education consortia
- Internationalize NIE’s programmes through external consultancy services

Strategy 2
Build NIE’s competence and capacity as a centre of excellence and innovation in educational and content research, through recruitment and promotion of sterling academic staff, and leveraging on international research partnerships.

- Introduce a strategic RD&I framework to maintain focus on priorities and relevance to global research issues
- Attract internationally distinguished academic staff
- Foster academic freedom to pursue diverse research interests
- Exploit synergies between teaching and research through a flexible, differentiated workload mechanism
- Expand NIE’s postgraduate research and fellowship programmes
- Align research at NIE with international norms and standards of excellence
- Participate in major international research partnerships
- Diversify funding base for research at NIE

Strategy 3
Introduce a proactive and enabling corporate support that anticipates NIE’s future needs in organizational management, governance, physical infrastructure and ICT, and incorporates an employment framework that allows flexibility between teaching and research roles, assigning each with an equitable value in performance assessments.

Governance & Management
- Review current governance and organizational structures to ensure continuing relevance and effectiveness
- Reinstate the NIE Establishment Committee to be chaired by the NIE Council Chair
- Consider establishing governance committee for external relations
- Introduce an institution-wide integrated management information system to improve efficiency, responsiveness and transparency in planning, administration, resource allocation and inter-departmental collaboration
- Align with international best practice for transparency, accountability, and good institutional governance

Human Capacity
- Upgrade rewards, compensation and career development frameworks to ensure competitiveness
- Implement a workload allocation practice of assigning differentiated workload taking into account individual strengths
- Improve staff recruitment strategies

Physical and ICT Infrastructure
- Expand NIE campus capacity to cater to full-time equivalent (FTE) of 7,800
- Improve physical and ICT infrastructure to maximize flexibility to accommodate new learning environments and paradigms, optimize utilization efficiency of existing facilities, on- and off-campus
- Make use of satellite campus e.g. MOE’s Teacher Development Centre (TDC)
- Deliver courses at cluster level in view of the space constraints at the NIE campus
- Consider extended teaching hours in anticipation of the increase in student enrolment and in view of the limitations to the expansion plans of the NIE campus

International thrusts
- “Locally responsive, globally relevant”
- Align research at NIE with international norms and standards of excellence
- Participate in major international research partnerships
- Diversify funding base for research at NIE
CHAPTER FIVE

NIE in 2012 –
The Rubrics of Success

5.1 Introduction
5.2 Teacher Education
5.3 Research
5.4 Institutional Capacity: A Modern, Efficient, Transparent Corporate Entity
5.5 Serving The Global Educational Community
5.1 Introduction

In implementing the 2007-2012 Strategic Plan, NIE aims to further enhance its reputation for excellence in teaching through the diverse range of initiatives detailed in previous chapters. The targets which NIE has set for itself are ambitious, but nevertheless realistic and achievable.

By 2012, how will NIE have changed as a result of this Strategic Plan? What are the rubrics of success? This chapter attempts to visualize NIE in the year 2012, having introduced and successfully implemented the three operational strategies and their respective initiatives.

Through undertaking major changes in the areas of international benchmarking, curriculum refinement, enhancing quality through evidence-based research, and establishing the linkages between research and student outcomes, a new organizational culture will emerge at NIE which is truly international, and truly outstanding.
5.2 Teacher Education

NIE’s teaching programme will be informed by evidence-based research also undertaken at NIE. This will help bring a stream of new pedagogies and content into the curriculum, and ensure cutting-edge relevance and responsiveness in a global knowledge-based economy. Emerging options for delivery such as e-learning and an IDM learning paradigm can help to catalyze the changes in mindsets which are needed in students and staff alike – NIE will be perfectly positioned to design, test and evaluate the impact of new learning paradigms on student outcomes.

With the projected increase in capacity in pre- and in-service teaching and research expertise at NIE, the teaching programme will be uniquely positioned to demonstrate through leadership the value of a holistic approach, integrating pre-service and in-service professional development, focusing on life-long learning for teachers (and, by inference, for all citizens).

It is anticipated that by leveraging on NIE’s current foundations of excellence, the Strategic Plan interventions described will together make an invaluable contribution to the quality of education in Singapore at all levels. Furthermore, this will bring broad recognition of the ‘NIE Brand’ by the global educational fraternity, and an acknowledgement of NIE as a premier destination for teacher education in Asia and beyond.

5.3 Research

The interplay between teaching and research at NIE has already been referred to extensively. Despite this, it is rare among tertiary teacher education institutions to find teaching complemented by institutional competence in research in both content and pedagogy. In establishing such a unique profile, NIE has already set the stage to exploit powerful synergies, and achieve high international distinction and excellence in both spheres.

By 2012 NIE will have developed and implemented an integrated strategic management framework for research, development and innovation. The framework will be essential in defining institutional priorities and will include mechanisms for reporting and intellectual property management.

With a well-balanced research agenda to address core national research priorities, academic staff will also have greater freedom to pursue their own diverse individual research interests, within broad institutional guidelines. Moreover, academic staff will benefit from the flexibility offered by differentiated tracks for teaching, research and services, recruiting of staff dedicated specifically to teaching, and a differentiated workload ratio for teaching, research and services.

The diversity and richness of NIE’s research portfolio will be fostered and protected by the projected expansion of its postgraduate research and fellowship programmes, a realignment towards international norms and standards, participation in major international research partnerships, and a broader funding base.

Finally, NIE’s leadership role in educational research will be strengthened through a strong academic profile including globally renowned academics. By 2012 10% of NIE’s academic staff will be at the level of full professor.

“The proposed research agenda would position NIE as a leader in the global education landscape.”

Professor Marlene Scardamalia,
Ontario Institute of Studies for Education,
University of Toronto
IAP 2007
5.4 Institutional Capacity: A Modern, Efficient, Transparent Corporate Entity

The tripartite relationship with NTU and with MOE is the cornerstone of NIE’s success, and will continue to generate valuable synergies and long-term stability for NIE. At the same time, by 2012, NIE’s links with alumni, the private sector, international organizations and global centres of excellence will have greatly extended through its international exposure over the plan period.

Accomplishments in the main programme areas will be accompanied in tandem with major enhancements to the supporting corporate framework, to accommodate the needs of a projected enrolment of 7,800 FTE by 2012. Perhaps most importantly, NIE’s staff rewards, compensation and career development frameworks will be substantially upgraded to ensure continuing competitiveness against national and international benchmarks. As an institution, NIE will reflect international best practice for transparency, accountability, and good governance, measured against global standards of organizational excellence and best practice.

Over the duration of the plan period, NIE’s holistic focus will be constantly strengthened. This task will be greatly facilitated by an institution-wide management information system which will improve efficiency, responsiveness and transparency in planning, administration, resource allocation and inter-departmental collaboration.

Improvements to NIE’s supporting physical and ICT infrastructure over the coming five years are designed to maximize flexibility to accommodate new learning environments and paradigms, and optimize utilization efficiency of existing facilities, both on-campus, and at satellite campuses.

5.5 Serving the Global Educational Community

NIE’s role as an educational institution goes well beyond its formal mandate for teaching and research. Today, through its educational role and community services, NIE makes diverse and important contributions towards strengthening Singapore’s social fabric.

In the medium term, this role will be further extended, with Singapore’s future citizens benefitting from a learning environment that prepares them with new skills to compete and thrive in a technology-driven world without borders. This includes a vibrant, multi-cultural campus, with global linkages and an international culture.

As outlined in this Strategic Plan, NIE’s contribution to global education will substantially increase over the coming five years; by 2012, it is anticipated that as an Institute of Distinction, NIE and its programmes – including teaching, research and consultancy services – will attain a level of excellence parallel to that of top universities, and can thus serve not only Singapore society, but a much wider diversity of cultures across the globe.

“The IAP was very impressed with the progress that NIE had made to date and felt that the proposed strategies and additional resources would position NIE very well to both meet the needs of its stakeholders and to serve as a model for the international education research community.”

IAP 2007 Report – Concluding Remarks
### TEACHER EDUCATION

- Holistic teacher-centric continuum, integrating pre- and in-service professional development.
- Mapping of the PGDE into the MTeach / Ed programmes.
- Evidence-based curricula, informed by research.
- Excellence which is internationally benchmarked.
- New ICT-enabled pedagogies.
- Globalized education in a multi-cultural setting.

### RESEARCH, DEVELOPMENT AND INNOVATION

- Strategic RD&I framework to maintain focus on priorities and relevance to global research issues.
- Internationally distinguished academic staff profile.
- Academic freedom to pursue diverse research interests.
- Uniquely positioned to exploit synergies between teaching and research through flexible, differentiated workload mechanism.
- Expansion of NIE’s postgraduate research and fellowship programmes.
- Alignment with international norms and standards.
- Participation in major international research partnerships.
- Broader funding base.
- Compliance with international best practice for transparency, accountability, and good governance.
- Institution-wide management information system will improve efficiency, responsiveness and transparency in planning, administration, resource allocation and inter-departmental collaboration.
- Improved physical and ICT infrastructure to maximize flexibility to accommodate new learning environments and paradigms, optimize utilization efficiency of existing facilities, on and off-campus.

### INSTITUTIONAL CAPACITY: A MODERN, EFFICIENT, TRANSPARENT CORPORATE ENTITY

- Tripartite relationship with NTU and with MOE will continue to generate valuable synergies and long-term stability.
- Strong international linkages with alumni, private sector, international organizations and global centres of excellence.
- Projected enrolment of 7,800 FTE by 2012.
- Upgraded rewards, compensation and career development frameworks to ensure competitiveness against national and international benchmarks.
- Increased contribution to global education.
- NIE and its programmes – including teaching, research and consultancy services – will attain a level of excellence parallel to that of top universities, and can thus serve not only Singapore society, but a much wider diversity of cultures across the globe.

### SERVING THE GLOBAL EDUCATIONAL COMMUNITY

- Diverse and important contributions to Singapore’s social fabric, to prepare Singapore’s future citizens with new skills to compete in a technology-driven world without borders.
- Vibrant, multi-cultural campus, with global linkages and an international culture.
- Increased contribution to global education.
# NIE Strategic Planning Taskforce and Working Groups

## NIE Strategic Planning Taskforce

- **Prof Lee Sing Kong** (Chairman)
- **Prof Paul Teng** (Co-Chair)
- **Prof David Hogan**
- **Assoc Prof Quek Jin Jong**
- **Assoc Prof Cheah Horn Mun**
- **Assoc Prof Lim-Tee Suat Khoh**
- **Assoc Prof Philip Wong**
- **Mr Sim Cheng Tee**
- **Asst/P Alan Ch’ng**
- **Mr Peter Kwang** (till April 2007)

**Editorial Consultant:**

- **Mr Wyn Ellis**

**Secretariat:**

- Mrs Chang-Tan Wey Ling
- Ms Chan Guet Har

## Working Groups

### Working Group 1: International Positioning

- **Prof Leo Tan** (Chairman)
- **Prof David Hogan** (Co-Chair)
- **Prof Lee Sing Kong**
- **Prof Goh Kim Chuan**
- **Prof Gopinathan**
- **Assoc Prof Lim-Tee Suat Khoh**
- **Assoc Prof Philip Wong**
- **Mr Sim Cheng Tee**

**Secretariat:**

- Mrs Chang-Tan Wey Ling
- Ms Chan Guet Har

### Working Group 2: Infrastructure & Physical Facilities

- **Mr Sim Cheng Tee** (Chairman)
- **Assoc Prof Philip Wong** (Co-Chair)
- **Assoc Prof Chia Wei Khuan**
- **Assoc Prof Susan Wright**
- **Assoc Prof Subramaniam Ramanathan**
- **Assoc Prof Marissa Wettasinghe**
- **Mr Selvarajan Selvarathnam**
- **Mr Zaw Min**

**Secretariat:**

- Mrs Chang-Tan Wey Ling
- Ms Nenny Aryanti Noorman

### Working Group 3: Human Capacity

- **Assoc Prof Lim-Tee Suat Khoh** (Chair)
- **Asst/P Alan Ch’ng** (Co-Chair)
- **Prof Dennis McInerney**
- **Assoc Prof Shirley Lim**
- **Assoc Prof Luba Aksagoff**
- **Assoc Prof Lee Ong Kim**
- **Assoc Prof Ang Cheng Guan** (till end-Dec 2006)
- **Asst/P Kho Ee Moi** (from Jan 2007)
- **Mr Tan Hoon Chiang**
- **Mr Peter Kwang** (till April 2007)
- **Mrs Jacklyn Ko**

**Secretariat:**

- Mrs Chang-Tan Wey Ling

### Working Group 4: Programmes

- **Assoc Prof Cheah Horn Mun** (Chair)
- **Prof Paul Teng** (Co-Chair)
- **Prof Goh Kim Chuan**
- **Assoc Prof Sylvia Chong**
- **Assoc Prof Michael Chia**
- **Assoc Prof David Ng**
- **Assoc Prof Tan Oon Seng**
- **Assoc Prof Tan Seng Chee**
- **Assoc Prof Augustine Tan**
- **Assoc Prof Subramaniam Ramanathan**
- **Assoc Prof Angela Wong**

**Secretariat:**

- Assoc Prof Low Ee Ling
- Ms Lily Wai Mun

### Working Group 5: Governance & Management

- **Mr Sim Cheng Tee** (Chair)
- **Asst/P Alan Ch’ng** (Co-Chair)
- **Prof Gopinathan**
- **Assoc Prof Lim-Tee Suat Khoh**
- **Assoc Prof Augustine Tan**
- **Mr Peter Kwang** (till April 2007)
- **Mrs Koh-Goh Huey Cheng**
- **Mrs Michelle Choong**
- **Mrs Koh Sou Keaw**
- **Mrs Jacklyn Ko**

**Secretariat:**

- Mrs Chang-Tan Wey Ling

### Working Group 6: Research

- **Dr Koh Thiam Seng** (Chair)
- **Dr Teh Lai Woon** (MOE)
- **Prof David Hogan**
- **Prof Paul Teng**
- **Prof Gopinathan**
- **Assoc Prof Cheah Horn Mun**
- **Assoc Prof Lim-Tee Suat Khoh**
- **Assoc Prof David Hung**

**Secretariat:**

- Mrs Chang-Tan Wey Ling
- Ms Chan Guet Har