

# **"Synthesis Report: From Crisis to Opportunity, The Challenges of Educational Reform in Thailand"**

Prepared for  
the Office of the National Education Commission and  
the Asian Development Bank  
(TA 3585-THA)

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## Glossary of Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
AU	Assumption University
BMA	Bangkok Metropolitan Administration
CET	Center for Educational Technology
DCID	Department of Curriculum and Instruction Development
DGE	Department of General Education
ESCAP	Economic and Social Commission for Asia and the Pacific
FOE	Faculty of Education
GMS	Greater Mekong Sub-region
HRD	Human Resource Development
ICT	Information and Communication Technologies
IPST	Institute for the Promotion of Science and Technology
IMD	International Institute for Management Development (Switzerland)
LEA	Local Education Area
MOE	Ministry of Education
MOERC	Ministry of Education, Religion, and Culture (new Ministry name after restructuring)
NEA	National Education Act (August, 1999)
NEC	National Education Council
NESDB	National Economic and Social Development Board
OER	Office of Education Reform
OESE	Office of Education Standards and Evaluation (now ONESQA)
ONEC	Office of the National Education Commission
ONESQA	The Office for National Education Standards and Quality Assessment (Public Organization)
ONPEC	Office of the National Primary Education Commission
PPP	Purchasing Power Parity
PRA	Participatory Rural Appraisal
RU	Ramkhamhaeng University
STOU	Sukhothai Thammathirat Open University
TDTF	Teacher Development Task Force
THRDI	Thailand Human Resource Development Institute (proposed)
TDRI	Thailand Development Research Institute
TERO	Teacher Education Reform Office
TTC	Teacher Training College

# Executive Summary

## INTRODUCTION AND OBJECTIVES OF THIS REPORT

The basic objective of this report is to synthesize seven reports on education reform by international and local consultants engaged through a grant from the Asian Development Bank in support of Thai education sector reforms. A major goal is to identify key insights, understandings, and policy suggestions embedded in the various reports. Another important aspect of the report is its *integration of findings* from these documents. The report also reviews education sector policies in general and sub-sector policies in detail, in light of sector reforms recommended under TA 3585-THA described below. Major sector and sub-sector educational challenges are identified and a policy and strategic framework is presented for facilitating the success of educational reform in Thailand. Also included as an attachment is a project feasibility study for consideration by the Thai government related to enhanced educational quality, equity, and efficiency, particularly at the upper secondary level.

### TA 3585-THA and Its Objectives

The objective of the TA is to strengthen the capacity of the Royal Thai Government to carry out the education reforms mandated by the August, 1999 National Education Act (NEA), including measures to improving teaching and learning, administrative leadership, and community accountability. The TA provides funding to enable ONEC to introduce its education improvement model on a pilot basis in 250 schools nationwide. Three key components of the project are 1) refinement of strategies to promote student-centered learning, 2) continuous assessment, and 3) school-based management. Capacity building at the local level is a major feature of the project. The project also enables the empirical testing and assessment of the feasibility and readiness of Thailand for the decentralized educational management system called for in the NEA. To facilitate implementation of the project, funding was provided to engage three international and four local consultants in the areas of school reform policy, teacher education, information technology in education, learning process reform, evaluation and assessment, decentralization management, and research and reform implementation respectively.

### METHODOLOGY

In compiling this synthesis report, four basic methods have been used. In essence this is an informal, non-statistical meta analysis (that is, research about research, namely, in this case the seven basic reports by the project international and local consultants. Second, it involves an informal content analysis of the reports, seeking to identify common themes and issues. Third, to make the report as current as possible, supplementary materials are used such as the minutes of the National Education Commission (NEC) meeting of May 13, 2002 and various multi-media reports on the progress of educational reform in the Kingdom of Thailand. Finally, as a guiding framework, Wolcott's DAI (describe, analyze, and interpret) approach has been useful in synthesizing and integrating the seven reports and related materials.

## **SYNTHESIS OF TA CONSULTANTS' REPORTS**

### **The Evolution of Educational Reform in Thailand.**

In analyzing and studying contemporary policy issues, important historical and political context is often ignored. Actually, there have been four major periods of educational reform in Thailand:

- 1) King Chulalongkorn (Rama V) (late 1800s/early 1900s) was a great and visionary reformer whose policies transformed Siamese education into a modern secular system.
- 2) A student revolution in October, 1973, ushered in an era of educational reform characterized by an emphasis on equity, unity, and freedom of expression.
- 3) In the early and mid-90s, another attempt at educational reform emphasized Thailand's need to adapt to the challenges of globalization and internationalization.
- 4) Thailand's current educational reform initiatives stem from the shock of the Asian economic crisis and subsequent political reforms such as the new October 1997 Constitution, which mandated educational reform and decentralization. Thus, Thailand as part of its strategic path to economic recovery, initiated new education sector reforms, which have been supported by a technical assistance project from the ADB, which is synthesized in this report.

### **Thailand's Changing Economic Landscape**

As background for considering educational reform policies, it is critically important to understand Thailand's changing economic landscape. Four major trends should be noted:

- 1) Agriculture now represents only 13 percent of the Thai economy and the service sector has now grown to a high 47 percent. Thus, Thailand is increasingly booming a society in need of knowledge-workers.
- 2) The Gini coefficient for income distribution in Thailand is now 52.1, which is quite high reflecting a serious degree of income inequality.
- 3) The Thai economy has become increasingly international with (exports + imports)/GDP exceedingly 100 percent, a strong indicator of internationalization.
- 4) GDP/capita has now reached an impressive \$6,700 (PPP), reflecting the rapid economic and material development of Thailand during the past several decades. Thus, Thailand has the economic power and potential to support a quality educational system.

## **The Rationale for Educational Reform in Thailand**

Thailand's social and educational development has lagged considerably behind its level of economic development. *The 2001 World Competitiveness Yearbook* ranks 49 countries on both overall competitiveness and on numerous more specialized indicators. In terms of expenditures on education as a percent of government spending Thailand ranks an impressive second. However, in terms of general competitiveness its rank is only 38<sup>th</sup> and it also ranks 38<sup>th</sup> in academic competitiveness. With respect to the International Association for the Evaluation of Educational Achievement (IEA), Thailand's rankings in both science (25<sup>th</sup> out of 38 countries) and math (27<sup>th</sup> out of 38 countries) also lag behind. These data suggest that Thailand "is not receiving adequate bang for its *baht*." Thus, there is a clear need to enhance the efficiency of Thailand's educational system.

## **Major Strengths and Weaknesses of the Thai Educational System**

Thailand has achieved a number of impressive accomplishments in education. It has dramatically increased the size of its system at all levels. Literacy rates are at an impressively high 95 percent rate and universal primary education has been basically achieved. Over 80 percent of all teachers have received a bachelor's degree or higher. At the Ministry of Education itself, there are over 400 individuals with doctorates.

Despite these quantitative successes, several key problems persist. The educational system remains over-centralized and bureaucratized, with much duplication in educational services and related inefficiencies. There has been a neglect of science and mathematics reflected in the test scores mentioned above. There have been inadequate incentives to promote good teaching and teacher learning. Problems related to access and equity, particularly at the upper secondary level persist. Finally, there has been the problem of traditional learning methods and their emphasis on rote learning.

## **The New Approaches to Learning Movement**

Many in Thailand view learning reform as the heart of educational reform. Key scholars and thinkers in Thailand, encouraged and supported by the Office of the National Education Commission (ONEC), have contributed to a major rethinking of Thai approaches to learning reflected in the National Education Act (NEA) which emphasizes student-centered active learning. Among these individuals are Dr. Prawase Wasi, Dr. Montri Chulavatnatol, Professor Sumon Amornvivat, Dr. Tisana Khemmani, Dr. Chai-Anan Samudavanija, and Dr. Sansanee Chatkupt. Interestingly a number of these individuals are coming, not from education, but from fields such as medicine, chemistry, and political science.

## **Major Issues in Teacher Development**

International consultant Dr. Hitendra Pillay of Queensland University of Technology in Australia has identified a number of the major issues in teacher development related to learning and educational reform. These can be briefly summarized as follows:

- Inadequate dialogue among institutions involved in teacher training
- Authoritative top-down system of supervision
- Teachers' inadequate access to international dimensions of their profession and to become familiar with the latest trends, innovative research, and best practices in teacher education.
- Overly theoretical and abstract approaches to teacher education.

Given the serious problems related to teacher education, there have been a number of new initiatives to strengthen teacher development and teacher education. In this executive summary, there is only space to highlight several of these endeavors with a focus on the most recent ones. A new teacher licensing system was approved by the Thai Cabinet on May 29, 2002. Earlier in the month the Teaching Profession Development Association of Thailand was launched on May 4, 2002, and already has 55 Networks/Centers/Associations. It is anticipated that the number of members of these 55 Networks/Centers will be approximately 40,000.

Among the major recommendations made by Dr. Pillay to improve teacher education are the following:

- The new educational management model is integral to improving learning outcomes for students.
- A Manual of Policy and Procedures (MOPP) is needed to delineate clearly The respective roles, functions, and responsibilities of the various Organizations and agencies involved in teacher education.
- Teacher learning and development should be school-based, facilitated by the effective use of ICT.
- It is important to create Local Learning Centers to facilitate learning reform and life-long teacher learning.
- He urges careful consideration of *distributed learning* as a model to foster the use of diverse and multiple approaches to pedagogy, which should not be limited to only student-based learning.

### **ICT for Facilitating Learning and Educational Reform**

This section of the Report is based primarily on the work of consultant, Dr. John H. Stamper, of Pacific Learning Services in Hawai'i. Based on his fieldwork in Thailand, he first notes several constraints related to ICT adoption. They are primarily lack of funding for ICT equipment and its maintenance and the lack of experience of many administrators and teachers in the use of ICT. He also notes the problem of the under-utilization of existing ICT resources and resources that are "sheltered" to prevent their misuse or damage.

He then provides basic data on the IT situation in Thailand. He notes that normally the school use of IT follows that of the society in general. Currently in the rural areas of Thailand less than one percent of the population uses the Internet and only 21 percent of primary schools have telephones. Despite these constraints, it is fortunate that approximately 12,000 Thai schools have receptors to receive transmissions from

the Thai-Com 3 Satellite, the footprint of which covers all of mainland Southeast Asia.

After providing a valuable summary of a number of education-related network projects currently underway, Dr. Stamper then goes to propose a visionary new Asian Education Network (AEN), which would utilize Thai-Com 3 as a source of diverse ICT learning materials. He strongly emphasizes that ICT is far more than computers and the Internet, but also includes CD ROMs, television and radio broadcasts, and diverse audiovisual material. He suggests that Thailand develop this project through a three year pilot project. Following that the project could be potentially expanded to improve the quality of education in neighboring countries such as Laos and Cambodia. The proposed project could be implemented with differing levels of technology and Dr. Stamper provides detailed cost information for doing the project with state-of-the-art technology.

### **The National Pilot Project**

The key component of this TA was to pilot the new model of learning and school reform around the country. Nearly 4,000 applications from schools were received. 250 schools of diverse types around the country were selected for participation. Several key operating assumptions of the project were:

- Readiness of schools around the country to implement learning and educational reform in accord with the 1997 Constitution and 1999 NEA.
- A *bottom-up* rather than top-down approach to change
- Use of a new model of collegial, collaborative, and consultative "supervision" involving 44 local R & D teams to assist participating schools.
- Emphasis on an *integrated* approach to curricular change.

Local ADB Thai consultants developed a rigorous and systematic design for evaluating the project using an inductive method, maximum variation sampling, and extensive triangulation, using a variety of quantitative and qualitative research methods such as focus groups. A massive amount of data about the pilot project was collected in only eight months

In numerous workshops, schools were provided broad guidelines related to the conduct of the project. However, they were given total discretion to develop their own distinct and creative ways to achieve student-center learning reform and school-based management. A PDCA (Plan, Do, Check, Act) model was provided as a general guide to implement learning and school reforms.

The mechanism for providing funding to participating schools was designed to test some key ideas related to decentralization. *Targeted "mini-block grants"* were made to schools. The smaller more remote schools generally received twice the funding of the larger more well-to-do schools. Such target funding is important to address persisting regional disparities and was certainly appreciated by the schools affected.

Professor Sumon Amornvivat in a book already published by ONEC, based on her assessment of the pilot project, provides extensive and detailed examples through

various case studies and concrete examples of the diversity of creative learning activities that emerged. Many of the projects developed related to environment and/or cultural preservation. Responsive to the 1999 NEA, many projects also involved the use of local knowledge/wisdom and moral education. Some common themes and constructs identified in various projects were empowerment, diversity, creativity, partnerships, links to real life (authentic learning), integration, teamwork, and reflexivity.

Dr. Nonglak Wiratchai, another local consultant conducted numerous quantitative analyses, based on pre- and post- project results, looking at gain scores on various indicators based on the NEA and key elements of learning reform. On every indicator significant gains were found and interestingly, the variation in outcomes, declined for every indicator, indicating greater equality. She also found important variations according to various types of disaggregation. For example, perceived change was greatest among ONPEC and BMA schools.

Dr. Laeka Piya-Ajariya found that approximately 25 percent of the schools were quite successful in carrying out reforms and ready for sustainable continued efforts without special assistance. Another 65 percent of schools were somewhat successful but still need some external assistance. Finally, there are about 10 percent of schools that are just starting the reform process.

Standard demographic and administrative factors such as region of school, size of school, and administrative authority were not significant factors in explaining the success of school-based management. Instead what was critically important was the motivation and capabilities of the school administrators and their use of the principle of *distributive leadership*, that is sharing power broadly with others. Another important factor was school-community relations, which were generally stronger in the more remote rural areas.

From the Pilot Project and various consultant reports, six tetrahedrons were developed to synthesize key elements in this TA. The tetrahedron is taken from physics (Dr. Sippanondha Ketudat 1981) and is a special figure to show four complex and deeply interrelated factors. The first tetrahedron is a model of leadership derived from the Pilot Project emphasizing four keys to leadership: namely, distributive leadership, servant leadership, diversity leadership, and accountability leadership. The second tetrahedron synthesizes the key interrelated dimensions of successful educational reform, namely, structural changes, quality of leadership, quality of teachers, and ICT. The third tetrahedron summarizes a holistic approach to educational and learning including, whole system, whole school, whole teacher, and whole student. The whole student concept is elaborated in the fourth tetrahedron. The fourth tetrahedron represents the pedagogy of the whole person and related software of the mind, involving heart (moral education), left brain (analytical, critical, and cognitive thinking), right brain (aesthetics, creativity, arts), and body (exercise and health). The fifth tetrahedron represents the important relationship of culture to education and progress, an important point emphasized in the consulting report of Dr. Rie Atagi. The final tetrahedron relates to the importance of *autonomous learning* and its potential for improving educational productivity and encouraging life-long learning.

## **STATUS AND PROGRESS OF EDUCATIONAL REFORM**

In general, the Thai situation reflects "reform energy" not "reform fatigue." Extensive activities have been carried out by diverse groups and agencies in support of the NEA and educational reform. The full report provides a detailed assessment of progress to date. Pilot projects involving the new approaches to learning, school-based management, and curricular decentralization have gone extremely well. The new pilot project experiment with LEAs in five provinces appears to confirm the major recommendations made in an earlier ADB TA focusing on the management and financing of education. The major remaining problem area is policy gridlock related to the exact nature of the restructuring of the Ministry of Education.

## **IDENTIFICATION AND ANALYSIS OF MAJOR ISSUES, CHALLENGE, AND PERSISTING OBSTACLES RELATED TO REFORM**

To enhance its quality of life and standard of living a nation must improve the productivity of its people. The primary means for doing this are education and human resource development broadly defined. During the period, 1960-1990, the productivity of the Japanese people increased dramatically, primarily as the result of having a quality K-12 basic educational system that ensured that nearly all Japanese had a good solid educational foundation, giving them solid potential for trainability. Indicated below are the major issues and challenges currently facing education and human resource development in Thailand:

- **Lack of unity and coordination of diverse and fragmented Education/HRD efforts**

Human resource development and education in Thailand remain fragmented with a multitude of institutions and organizations involved, with little overall coordination. Dr. Rie Atagi, for example, identifies 11 different pilot projects currently being conducted related to learning reform, ICT in education, and the decentralization of educational administration and management. Her list is not exhaustive, as there are also numerous other important pilot projects going. No single agency has responsibility for coordinating these diverse pilot projects.

- **Extent of commitment to genuine decentralization, particularly in the areas of budget and personnel**

Thus far, much of the education reform efforts have focused on learning reform and related curricular decentralization. With respect to this domain, a strong and growing consensus has emerged with important changes in organizational cultures. Experimentation with Local Education Areas thus far has focused on structural issues and administrative coordination, rather than on any significant budget or personnel decentralization.

- **Neglect of science and related R & D development**

Rie Atagi (2002: 24) in her report documents that Thai students are receiving much less instruction time in science and mathematics compared to students in many other countries.

- **Persisting equity and access issues**

The major progress in this area is the requirement of the Constitution and the NEA to make nine years of education compulsory and to guarantee 12 years of free education to all Thais. With the near achievement of universal primary education, the access and equity issue is now most pertinent at the secondary level where considerable regional disparities continue to exist. The northeast of Thailand, the most disadvantaged and the region with the largest population tends to lag significantly behind on all major socioeconomic indicators. Many schools in the most disadvantaged areas still face teacher shortages. The existence of extensive coaching schools in urban areas such as Bangkok for the elite further exacerbates educational regional disparities.

- **Overemphasis on bricks and mortar relative to investing in people (teacher learners; researchers)**

In her report, Atagi (2002: 23) mentions the large amount of funds devoted to new buildings and land. Dr. Silaporn Buasai of the Thailand Research Fund laments that in terms of funding for research "buildings and offices come first." The key to improving both national productivity and the quality of education is to give high priority to an investment in people, teacher learning, and creative innovative research.

- **Inadequate utilization of ICT for improving human resource development.**

Friedman in his important work on globalization argues that those countries which do not adequately train their people for the new knowledge economy will be left behind and won't be able to compete effectively in the global economy.

- **Inadequate development of international capabilities**

This was an important theme of Dr. Pillay's report. Many Thais are not adequately interconnected with the global knowledge system, largely because of language limitations.

## **CONCLUSION AND MAJOR RECOMMENDATIONS: A STRATEGIC FRAMEWORK FOR MAKING REFORM A SUCCESS**

In some ways, despite its many painful and tragic human costs, the Asian economic crisis represented a "wake-up call" to Thailand and it inspired much needed reform initiatives in numerous arenas. Despite a partial economic recovery, Thailand fortunately has not suffered from reform fatigue. In fact there is an impressive degree of reform energy in the education and human resource development arena. However, the clock is quickly ticking. Thailand is already some 10-15 years behind where Korea was in the early 1980s, in the area of science, research, and development (see *Matichon* 6/1/02: 2; Ghani 2002: 51). Korea has launched an ambitious Brain Korea 21 project to create high quality human resources for the 21<sup>st</sup> century knowledge-based society (MOEHRD 2002a,b, and c). Their target is to produce 1,300 doctorates per year in the fields of natural sciences and engineering by 2006. While Thailand still has a substantial lead over potential economic competitors such as China, Vietnam, and India in numerous economic areas, such countries are devoting

significant priority to enhance their human resource development to try to close the gap and surpass countries such as Thailand.

The National Pilot Project supported by the ADB clearly confirms the important theme of realizing unrealized potential. Given the opportunity, schools from around the country demonstrated impressive creativity in developing more student-centered learning curricula. Students also had many opportunities to demonstrate their ability to be innovative and creative. Another encouraging recent example is the Thai high school student who competed with more than a million youth around the world to win the 1<sup>st</sup> prize of an Intel competition in computer software development (*The Nation* 5/21/02: 3A). Given Thailand's long tradition of strength in aesthetics, the country has special potential in the area of computer graphic design and e-commerce.

In addition to the recommendations associated with the issues identified above, the following are key elements integral to Thailand's successfully implementing educational reform and improving the productivity of its people.

### **Major Recommendations Related to Teacher Development and Learning Reform**

- With respect to the promotion of learning reforms, the National Pilot Study has demonstrated the importance of *holistic approaches*. Whole school, whole teacher, and whole student approaches should be actively promoted and supported. As emphasized by His Majesty King Bhumibol Adulyadej, the promotion of *moral education* as part of the whole student approach is critically important (Sumon 2002a :1). The value of *integrated* across-the-curriculum innovations has also been demonstrated. To implement the new 2001 curriculum, it is important to mobilize wisdom and knowledge *from all sources* (Sumon 2002b: 6). There must also be a holistic approach with respect to policy, planning, and implementation.
- With respect to pedagogy related to learning reform, both Sumon (2002a,b) and Pillay (2000) emphasize the need for a *distributed learning model*, which emphasizes multiple and diverse pedagogical strategies to encourage active, dynamic learning. There is no simple, single formula for effective teaching (Sumon 2002b: 6). The metaphor of a teacher being like the conductor of a symphony with the various instruments representing the diverse repertoire of teaching strategies and approaches may be useful to symbolize the distributed learning model. Teachers must be *empowered* to enable them to develop their own creative teaching models appropriate for their context and situation. To implement this distributed learning model, the educational supervisory system must also be transformed so that supervisors support those already engaged in distributed learning and to encourage and assist others in moving in this new direction.
- It is critically important to align the new standards and quality assurance evaluations with the new curricula and learning approaches being emphasized with major learning reform and curricular changes. With the merger of the MUA and MOE, the critical university entrance examination must also be reviewed to ensure that it is consistent with the learning reforms being

implemented. This will require sincere and serious cooperation between the new Ministry and the universities at the policy level. If new models of assessment are not congruent with the new methods of teaching and learning, unanticipated serious adverse effects may emerge.

- In terms of teacher development, given the large number of teachers already in service, this needs to be a priority group. Critical to the success of educational reform is teachers' "solid understanding of the concepts, principles and processes involved in the new approaches of teaching and learning" (Pillay 2002: 49). Innovative models of delivering training must be explored which will involve *hybrids* of school-based training, intensive workshops, and use of ICT (Pillay 2002: 50). The emphasis should be on the development of life-long *teacher learning*.
- The National Pilot Study has demonstrated the value of classroom-based *collaborative action research* to improve learning outcomes. Budgetary support for such research should be a priority (Lekha 2002: 23).
- To facilitate implementation of the new learning reforms and teacher learning, there is also a need to develop Local Learning Resource Centers with diverse resource learning materials relevant to the new student-centered learning process (Pillay 2002: 52-53; Atagi 2002: 63-67). The Department of Curriculum and Instructional Development (DCID), for example, has already developed an extensive and valuable manual related to the teaching of religion and morality under the new 2001 curriculum. With respect to such materials developed by various units of the Ministry, traditionally there has been a tendency for teachers to view such materials as blueprints and mandates which must be mechanically followed. Under the new decentralized curricular system, it is important to stress that teachers must have independence to use their own creativity in developing curricula most responsive and relevant to local conditions and needs.
- With respect to teacher development, it is critically important to strengthen both Faculties of Education in universities and at the Rajabhat Institutes. Their teaching and curricula need to be more closely aligned with both Thai local educational realities and international best practices (Pillay 2002). It is critically important to have teacher education students become involved with local communities and schools. They must seek to achieve an important balance among international, national, and local approaches. Incentives must be developed to *mobilize* local academic resources in support of educational reform. The National Pilot Project has clearly demonstrated the potential of such local institutions, if provided the opportunity to engage with local schools and communities..
- It is extremely important to change the system for evaluating administrators and teachers to provide more systematic rewards for those who are successful in improving student outcomes. The need to establish new *incentive systems* is emphasized by Laeka (2002), Pillay (2002), and Atagi (2000: 68-69). It is important that these new incentive systems be *performance-based*. The evaluation system needs fundamental reform to shift away from an emphasis on power and control. Instead the emphasis should be on self-evaluation and the role of local communities in ensuring accountability for their schools (Sumon 2002b: 6). The evaluation system should be characterized by *kalayanamitr* (an

amicable approach emphasizing the three Cs: consultation and collaboration for creativity).

- Related to incentives, it is important to provide *rewards to effective reformers* such as national teachers, master teachers, lead teachers, Thai local wisdom teachers, and master administrators. These dedicated and committed individuals need reinforcement and empowerment. The research reports on the National Pilot Project of both Prof. Sumon and Dr. Laeka emphasize the critically important role of such *local change agents* in promoting educational reform and innovation. This network needs to be significantly expanded to reduce the excessive burden on many current teachers with such stature (Sumon 2002c: 42).
- Related to teacher utilization, each LEA should develop an EMIS which provides a clear profile of teacher distributions across the LEA. Every effort should be made to minimize the number of schools with inadequate teachers to cover every class. From the previous TA2996, this was shown clearly to have adverse effects on the quality of learning outcomes. In cases in which it remains impossible to provide a teacher for every classroom, the innovative activity-based learning tested in the National Pilot Project should be utilized as a strategy for improving learning in such difficult situations. As part of the LEA's EMIS, there should also be an emphasis on examining the extent to which *learning outcomes are equalized*, a key and valuable indicator used in Dr. Nonglak's report and evaluation.
- Related to teacher development, a new program of *volunteer teachers* should be introduced to assist the most disadvantaged LEAs which have the most serious shortages of teachers. This may be a way of attracting some bright students in the sciences, mathematics, and English language to the teaching profession. Students successfully completing assignments should be provided fellowships to pursue a Master's in teacher education. As demonstrated by the 44 R & D teams in the National Pilot Project, this is also a way to enhance consciousness about the educational problems of remote rural areas. This strategy also deals with the problem of unemployed university graduates, which is still a lingering, though now less severe, aspect of the 1997 Asian economic crisis.
- Also related to teacher development, the Thai government, first on a pilot basis, should experiment with the concept introduced by TERO and Dr. Montri Chulavatnatol of issuing training coupons or vouchers as a way to foster continued teacher learning. Perhaps the new Association for the Development of the Teaching Profession or the newly reorganized Teachers' Council could monitor this process. This approach represents a highly innovative and individualized approach to continued teacher learning, crucial to the success of education reform.
- In terms of ICT, the Thai government must leap frog (quantum leap) but focusing on only *appropriate high technology*. ICT must be a tool, not an end. Thailand's excellent strength in satellite technology infrastructure gives the country special opportunities and advantages to play an important lead role in the proposed Asian Education Network. Thus, through appropriate ICT utilization, Thailand has considerable potential to reduce its own significant digital and information divide and to prepare its students, teachers, and

administrators to have solid ICT capabilities to facilitate their becoming *autonomous, life-long learners*.

### **Major Recommendations Related to Management, Leadership, and Structural Issues**

- Visionary leadership with strong political will is critical. Improved *management for change* is important at all levels. Funds going to education must be more efficiently used. The newly restructured Ministry of Education must become a visionary "leader which thinks big" while leaving the basic management of education to the new Local Education Areas.
- It is important to announce formally the decision to have 295 Local Education Areas, based on the joint research of the MOE, ONEC, and ONPEC. This recommendation is based on pilot local field research confirming the cost-effectiveness and efficiency of this mode of decentralization. It is also consistent with the earlier recommendations of TA 2996 THA supported by the ADB.
- Also related to leadership, the National Pilot Study clearly demonstrated that *distributed leadership* is a highly effective model that needs to be promoted at all levels since it leads to empowerment and maximal participation. This approach should be emphasized in administrative and leadership training, based upon the solid empirical support from the National Pilot Study. Also educational management training must be aligned with the promotion of the new student-centered learning approaches and the role of educational leadership in promoting curricular innovation and support for reform-minded teachers. Given the importance of school leadership as a key factor in the National Pilot Study, *leadership training* is critically important (Atagi 2002: 62). As Pillay (2002: 47) emphasizes, it is critically important "to inform all stakeholders why a new management model is necessary and how it will improve the learning outcomes of students."
- It is critically important to both sustain and expand networks of targeted schools, academic associations, and other groups in support of educational reform. Such a movement can play an important role in building local level community support for education and learning reform (Lekha 2002: 23-24). Many schools in the Pilot Project have attempted to create and expand networks, but thus far there has been inadequate administrative and community support for such efforts (Sumon 2002c: 42).
- Related to this important leadership theme, the government needs to establish a small but high quality interdisciplinary think tank on national human resource development strategies that transcends individual ministries and reports directly to the Prime Minister, while thinking only strategically in terms of the *national interest*. Involved in this think tank should be quality strategic futurist thinkers from, for example, the Ministry of Education; the Ministry of Science and Technology; NESDB; the universities; several key private sector individuals; key NGOs with an interest in HRD; and TDRI. Thailand clearly has the talent to staff such a think tank. Since people are a country's most important resource, having such a supra-agency could play a valuable policy role in assisting the government to invest wisely and effectively in human resource

development. Such a think tank might be called the Thailand Human Resources Development Institute (THRDI). This organization should be *independent, free from partisan political influence*. This strategic unit should be a research think tank to influence educational and human resource development strategies. It should also serve as a clearing house to integrate and synthesize research related to educational development.

- Coalition building is also crucial to the success of educational reform. Though considerable progress has been made in this arena, particularly in developing public support and understanding of the need for educational reform, *further bureaucratic coalition building* is still imperative. This has certainly been hindered by the maze of organizations and stakeholders involved in educational reform and by some major differences in thinking about new administrative structures.
- As the National Pilot Study is extended nation-wide, it is extremely important that the *targeting element* in the pilot project be significantly expanded by emphasizing block grants (as part of budget decentralization) that put "the last first" to try to reduce regional educational disparities and to ensure that the equity principles guaranteed in the 1997 Constitution and 1999 NEA are met. To pursue such a policy is not only right and just, but is also good politics, since the most disadvantaged Northeast has the largest population. Such targeting will also importantly built further sustainable rice-roots support for educational reform. Such a strategy will also help to identify talent in the populous Northeast. For Thailand's future it is important that *all* its talent be realized.
- Continuity in leadership is important at all levels. Frequent changes in administrators are highly disruptive of the reform process. Having the top civil service leadership in the Ministry of Education change nearly every year is not conducive to producing visionary leadership for change.
- As emphasized by Professor Sumon Amornvivat and Dr. Lekha Piya-Ajariya, it is critically important to have *unity* among the diverse agencies and organizations responsible for education and human resource development. Continued fragmentation in the administrative area will adversely affect chances for successful educational reform (Sumon 2002c: 41-42).
- Finally and perhaps most importantly, it is imperative that bureaucratic vested interests not be allowed to block critically important structural changes mandated by the 1997 Constitution and the 1999 NEA essential for Thailand to improve the productivity of its educational sector and strengthen its international competitiveness.

## **Synthesis Report: From Crisis to Opportunity, The Challenges of Educational Reform in Thailand**

Yes, you may well doubt, you may well be uncertain...  
Do not accept anything because it is the authoritative  
tradition, because it is often said, because of rumor or  
hearsay, because it is found in the scriptures, because it  
agrees with a theory of which one is already  
convinced, because of the reputation of an individual,  
or because a teacher said it is thus and thus... But  
experience it for yourself.

The Lord Buddha  
Kalama Sutta

The essence of developing good people is sharing knowledge, concepts, and abilities through the provision of education and academic training of various types. Whether it is general knowledge subjects career/ professional training, or religious study, these are necessary for our youth and to ensure everyone's secure and bright future. If our schools can provide good academic training and prepare people to know their duties and to be good citizens, then that will have real benefits. At the same time it also important to train people to understand religion. This means providing our youth with comprehensive holistic education, which will enable them to be bright and open-minded. That will help enable them to have a clear and broad understanding of religion. Shaping behavior in accord with religion is both right and secure and will help our young people to become good citizens and to have high moral character.

His Majesty King Bhumibol Adulyadej, in a speech to Islamic leaders (*Imam*) in southern border provinces and to representatives of private Islamic schools of the Second Education Region, October 8, 1988.  
(cited in Sumon 2002a: 1).

## **INTRODUCTION AND OBJECTIVES OF THIS REPORT**

The basic objective of this report is to synthesize seven reports on education reform by international and local consultants engaged through a grant from the Asian Development Bank in support of Thai education sector reforms. A major goal is to identify key insights, understandings, and policy suggestions embedded in the various reports. Another important aspect of the report is its *integration of findings* from these documents. The report also reviews education sector policies in general and sub-sector policies in detail, in light of sector reforms recommended under TA 3585-THA described below. Major sector and sub-sector educational challenges are identified and a policy and strategic framework is presented for facilitating the success of educational reform in Thailand. Also included as an attachment is a project feasibility study for consideration by the Thai government related to enhanced educational quality and equity, particularly at the upper secondary level.

### **TA 3585-THA and Its Objectives**

The objective of the TA is to strengthen the capacity of the Royal Thai Government to carry out the education reforms mandated by the August, 1999 National Education Act (ONEC 1999), including measures to improving teaching and learning, administrative leadership, and community accountability (ADB 2000: 4). The TA provides funding to enable ONEC to introduce its education improvement model on a pilot basis in 250 schools nationwide. Three key components of the project are 1) refinement of strategies to promote student-centered learning, 2) continuous assessment, and 3) school-based management. Capacity building at the local level is a major feature of the project. The project also enables the empirical testing and assessment of the feasibility and readiness of Thailand for the decentralized educational management system called for in the NEA. To facilitate implementation of the project, funding was provided to engage three international and four local consultants in the areas of school reform policy, teacher education, information technology in education, learning process reform, evaluation and assessment, decentralization management, and research and reform implementation respectively.

## **METHODOLOGY**

In compiling this synthesis report, four basic methods have been used. In essence this is an informal, non-statistical meta analysis (research about research, i.e., the seven basic reports by the project international and local consultants). Second, it involves an informal content analysis of the reports, seeking to identify common themes and issues. Third, to make the report as current as possible, supplementary materials are used such the minutes of the National Education Council meeting of May 13, 2002 (NEC 2002) and various multi-media reports on the progress of educational reform in the Kingdom of Thailand. Finally, as a guiding framework, Wolcott's DAI (describe, analyze, and interpret) approach (1999) has been useful in synthesizing and integrating the seven reports and related materials.

## SYNTHESIS OF TA CONSULTANTS' REPORTS

### **Historical/Political Context: From Crisis to Opportunity, the Evolution of Educational Reform in Thailand.**

In analyzing and studying contemporary policy issues, important historical and political context is often ignored. For that reason a brief historical summary of the evolution of educational reform in Thailand is provided here.

In the case of Thailand (actually known as Siam throughout its history until 1939 and again from 1945-1949), educational reform is nothing new. King Chulalongkorn (Rama V), similar to the Meiji Emperor in Japan, was a great reformer (Wyatt 1969; Wutichai 1986) and put into place policies that dramatically transformed Siamese education from a religious-based temple system to a modern secular system (see Watson 1980). Another important part of King Rama V's visionary reforms and subsequent policies of King Rama VI was to send bright Siamese overseas for training, primarily in France and England.

Subsequently from 1932 to 1973, Thai politics was characterized by the Buddhist concept of *annijang* (impermanence) (Pridi 1970) with many shifts back and forth between civilian and military rule. Cynics and critics argue that, in fact, the absolute monarchy was replaced by authoritarian military rule, despite certain periods of civilian rule.

In October, 1973, a student uprising and related people power "explosion" overthrew Thailand's military rule and ushered in a genuinely democratic system. A major educational policy reform ensued (Sippanondha 1975; Apichai 1975) emphasizing greater equity, access, equality, and openness. Only three years later, however, on October, 6, 1976, the military struck back in a counter action installing Thailand's most repressive regime in the modern period and this brought the educational reform movement to a sudden halt. Fortunately, in a little over year another coup successfully overthrew this regime and restored democratic rule and moderate politics to Thailand.

One of the major pillars of educational reform in the 1973-1976 period was to achieve more unity in education. Three different ministries were in charge of each of the major levels of education, making planning and coordination problematic. In 1980, the former chairperson of the 1973-1976 education reform initiative, Dr. Sippanondha Ketudat, a brilliant Harvard-educated technocrat, became Minister of Education, and amazingly orchestrated the shift of the control of primary education from the Ministry of Interior to that of the Ministry of Education.

Years later in May, 1992, another clash emerged between the military and people power. As earlier in October, 1973, people power won out. This led to new major educational reform initiatives emphasizing both decentralization and internationalization (Sippanondha 1996). Though little was accomplished in terms of decentralization, there were considerable efforts at internationalization and globalization (see Chai-Anan 1994).

The Asian economic crisis, which had its inception with the floating of the Thai baht on July 2, 1997, interestingly inspired a move toward genuine democracy in Thailand. A new constitution, Thailand's most democratic ever, was approved on October, 11, 1997, by a government beleaguered by the economic crisis (see Likhit 1992). Both educational reform and decentralization were mandated by the new constitution. Thus, Thailand as part of its strategic path to economic recovery, initiated new education sector reforms, which have been supported by a technical assistance project from the ADB which is synthesized in this report.

As background for this report, Table 1 provides key economic indicators for Thailand.

**Table 1: Key Economic Indicators: Thailand's New Economic Landscape**

<b>Statistical Indicator</b>	<b>Kingdom of Thailand</b>
Population	62.6 million (2001)
Population density	120 people per sq. km
GDP (PPP)* US \$ billions	413 billion
GDP per capita (PPP)	\$6,700
% urban	21%
% rural	79%
% of economy industrial	40%
% of economy agricultural	13%
% of economy service	47%
Level of exports (X)	\$68.2 billion
Level of imports (M)	\$61.8 billion
Exports/Imports	110.4%
(X+M)/GDP (non-PPP)	101% of GDP
Gini coefficient for income distribution**	52.5
Rate of poverty	14% (8.7 m)
Size of informal economy***	Huge, but unmeasured

*Note:* Data are normally for 2000 unless otherwise noted.

**\*PPP denotes Purchasing Power Parity, which adjusts GDP, based on differential costs of living in various countries. This measure is considered a more reliable indicator of a country's economic situation and status.**

**\*\*The Gini coefficient measure's inequality of income distribution. Its value ranges from 0 (perfect equality) to 100 (perfect inequality).**

**\*\*\*It has been estimated that the Thai informal economy is extremely large.**

**Thus, the formal official statistics significantly underestimate the real size of the Thai economy (see de Soto 1990).**

### **Rationale for Educational Reform**

In her report, "The Thailand Educational Reform Project: School Reform Policy," Rie Atagi (2002: 15-25) provides an excellent summary of the major rationale for educational reform in Thailand. Drawing on data from the World Economic Forum and its Global Competitiveness Report, she documents Thailand's decline in recent years in international competitiveness (see ONEC 2002a,b). Given the strategic importance attached to this factor by scholars such as Michael Porter at Harvard (Porter 2000), this decline represents a most serious issue, as Thailand faces increasing competition from neighboring Asian countries such as China, Vietnam, and India.

Table 2 provides an integrative summary of data in numerous arenas related to Thailand's international and comparative standing. Only in economic capability, does Thailand still retain a relatively strong ranking. These rankings support Atagi's claims related to management and administrative inefficiencies associated with Thailand's highly centralized bureaucratic system. These problems are particularly acute in the education and human resource development area in which there are many

both horizontal and vertical redundancies. The line-item centralized budgeting system also has many rigidities. Based on the data presented in Table 1, clearly Thailand is not "getting nearly enough bang for its *baht*" in terms of its impressive financial commitment to education.

Thailand's relative strong standing in the economic area is also reflected in Figure 1, developed by the Thai economist, Sirilaksana Khoman (2001: 30). This diamond model mirrors the data in Table 1, indicating that Thailand's social and educational development has lagged significantly behind its economic development.

Another serious problem area relates to educational quality, which is discussed in the section below analyzing strengths and weaknesses of the educational system. Atagi's report also notes persisting serious issues related to disparities and lack of equity to access to quality education.

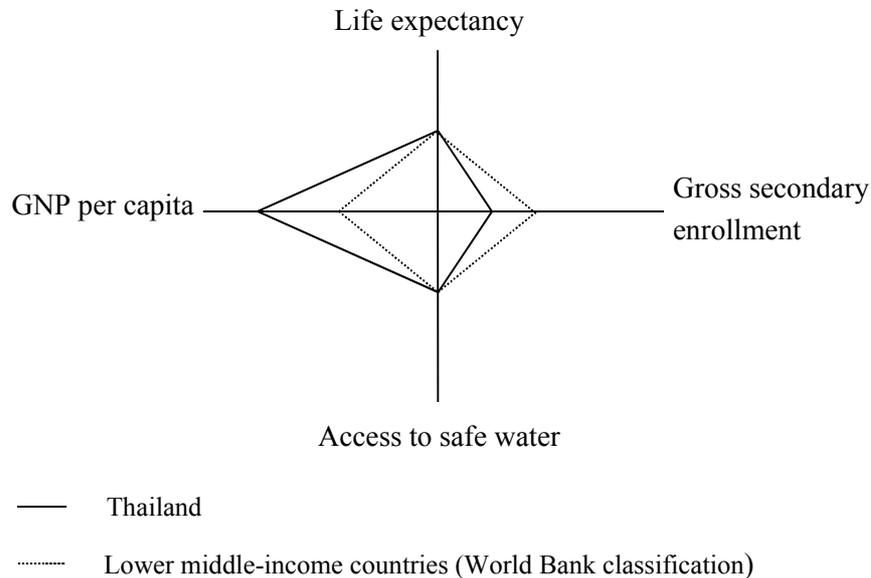
While the economic rationale for educational reform is certainly compelling, there are other socio-cultural and political reasons as well. While much attention has been devoted to the economic crisis which began in 1997, there has also been a concomitant social crisis reflected, for example, in drug abuse and other social problems, particularly for youth (see Thiti 2002). Thus, there is a critical need for stronger moral education, an integral part of proposed learning reforms. The latter is also directly relevant to strengthening civil society and minimizing irregular bureaucratic practices.

**Table 2: Thailand's International Ranking on Various Indicators**

<b>Statistical Indicator</b>	<b>Thailand's ranking</b>	<b>Number of countries ranked</b>
Percentage of national budget spent on education	#2	49
International competitiveness	#33	49
Innovation	#50	58
Efficiency of government	#39	49
Economic capability	#15	49
Private sector efficiency	#44	49
Basic infrastructure	#40	49
Educational capability	#44	49
Academic competitiveness	#38	49
Competitiveness in Science and Technology	#39	49
Competitiveness in Management	#40	58
Labor competitiveness	#48	58
Projected economic growth for 2003	#13	13 countries in the region
Rank in International Science Achievement (TIMSS) 1999	#25	38
Rank in International Mathematics Achievement (TIMSS) 1999	#27	38
Public Institutions Index Rank	#42	58
Integrity of Legal System	#8	9 countries of Asia-Pacific region
Corruption Perceptions Index	#64	85

Sources: *The 2001 World Competitiveness Yearbook*; International Association for the Evaluation of Educational Achievement (IEA); Onnucha (2002: 2); Lipset and Linz (2000: 113). Political and Economic Risk Consultancy (PERC), Ltd; Porter, et al. *The Global Competitiveness Report 2001-2002*.

**Figure 1: Thailand's Development Diamond**



### **Assessment of the Thai Educational System; Its Major Strengths and Weaknesses**

#### Major Strengths

In her consulting report on educational and school reform in Thailand, Rie Atagi (2002: 21) documents Thai success in areas such as literacy and the impressive quantitative expansion of the Thai educational system. Literacy has now reached 95 percent reflective of the excellent work of the Department of Nonformal Education and an earlier literacy campaign led by Dr. Kasama Voravan na Ayutthaya. That over 90 percent of Thai women are literate is a particularly noteworthy accomplishment of Thailand. Primary schooling is now almost universal and the Thai educational system was serving approximately 14 million students in 2001 (ONEC 2002: 13). 69.68 percent of the secondary school age group were in school. There are 45,398 pre-schools, 33,488 primary schools, 10,384 lower secondary schools, 2,799 upper secondary schools (general), and 896 upper secondary vocational schools. There are now 760 colleges and universities serving approximately 1.1 million students in 2001 (ONEC 2001a: 113). Also the physical infrastructure of Thai educational institutions is generally quite good and far superior to that of neighboring mainland Southeast Asian nations. 98 percent of Thai schools now have electricity, for example (Stamper 2002: 34).

Dr. Hitendra Pillay (2002: 6) in his report on teacher development for quality learning notes that the Thai government has not only provided schools, but also a large teaching force. The total teaching force at the P-12 level is 562,247 (ONEC 2001:

88). With such a large number of teachers, Thailand has relatively low student-teacher ratios at both the primary (20.7) and secondary (21.6) levels (Pillay 2002: 6). It should also be noted that Thailand in general has an impressive number of extremely well-educated (in terms of formal qualifications) educators (both administrators and teachers) (see Table 3). Within the MOE itself, there are over 400 individuals with doctorates, a number from the world's best universities. This is primarily the result of the Thai civil service system, which has encouraged further study by enabling officials to retain their regular salaries while on formal study leave in Thailand or other countries. Over the decades Thailand has also been the beneficiary of substantial international assistance, which has enabled many Thai educators to study abroad.

Table 3 also indicates the large proportion of the Thai budget, which is allocated to education, roughly three times the amount allocated for the national defense budget (ONEC 2001b: 21).

**Table 3: Key Background Statistical Indicators on Thai Educational System**

<b>Statistical Indicator</b>	<b>Value for Thailand (2001)</b>
Percent of age group enrolled in school:	
Pre-primary	95.8
Primary	103.2
Secondary	69.7
Upper secondary	57.3
Post-secondary	24.9
Average years of education of work force	7.2
Academic qualifications of teachers,K-12	
Less than bachelor's (%)	14.8
Bachelor's	74.7
Master's	6.9
Doctorate	1.2
% of GDP spent on education	4.01
% of government budget spent on education	24.35
% of government budget spent on pre-primary and primary	44.4
Spent on secondary education	23.7
Spent on higher education	17.2
% of government education budget spent on personnel	47.2
% if government education budget spent on land and buildings	25.0

Source: ONEC 2001b

### System Weaknesses

Despite the impressive quantitative expansion of Thai education and relatively good formal educational qualifications of Thai educators, serious quality problems exist in

a number of areas reflected in Thailand's rankings noted above. These problems may be grouped into these four areas:

- Structural and management issues
- Teacher quality, pedagogy, and methods of learning
- Quality of personnel and related incentives
- Curricular priorities

#### *Structural and Management Issues*

The Thai educational administrative system is both highly centralized and fragmented. Atagi (2002: 23) points out there is a "maze of ministries and departments with overlapping responsibilities." There is an imbalance among funds spent on administration, construction, personnel, and quality improvements, with inadequate attention given to the latter. Atagi notes that only 0.79 percent of the budget is spent on improving the quality of teachers and there is considerable concern among all three international consultants that previous in-service training of the short intensive workshop type removed from site has not been particularly effective. The National Education Act of 1999 calls for a radical restructuring of the Ministry of Education. Such restructuring has resulted in rather intense policy debates about *alternative ways* of implementing this important component of the NEA. Prime Minister Thaksin Shinawatra also raised the important issue of how such restructuring will serve to benefit students directly.

#### *Teacher quality, pedagogy, and methods of learning*

Dr. Pillay is rather harsh in his critique of both the quality of teachers and the teacher training institutions which produce those teachers. He also laments that many teachers do not have proper teacher training qualifications. He argues that they are for the most part out of touch with current and progressive approaches to teaching. They are inadequately prepared for preparing students for the rapidly emerging knowledge society in which increasing numbers of individuals will become knowledge workers. He stresses that the limited capability in English of many Thai educators adversely affects their opportunities to be aware of diverse best practices around the world in the pedagogy area. A core element in the NEA and the Thai education reform is to move away from teacher-center learning and rote memorization to student-centered active learning (ONEC 2000). Dr. Pillay in his report reflects skepticism about the readiness of Thai teachers to adopt this new approach to learning. He also has concerns about an emphasis on a *single approach*, that is, student-centered learning.

#### *Quality of personnel and incentive systems*

Attracting good quality students to the teaching profession is another important problem noted by Pillay (2002: 22). This problem was also emphasized at the May 13, 2002, meeting of the National Education Committee (NEC 2002: 3.2: 2). He also notes that under the current management system, there is little relationship between teaching performance and rewards. The NEC also expressed concerns about moonlighting related to the low salaries for educators.

### *Curricular priorities*

Atagi (2002: 24) notes a serious "time on task" issue in Thai education. Thai students of age 12-14 are receiving much less instruction time in science and mathematics (167 hours a year) than students in a number of other countries. In contrast, students in Austria spend 325 hours on these subjects; students in Australia, 251 hours, and students in South Korea, 204 hours. Since science and mathematics are core subjects related to technology development, which directly affects innovation and productivity, this is an important and serious issue. Dr. Yongyuth Yuthawong (1997) has stressed the critical nature of this problem in many studies.

### **Major Issues in Teacher Development as Integral to Quality Learning Educational Reform**

It is quintessential to upgrade teachers and teacher education because the teachers play a key role in the education of the youth of Thailand...On the contrary, quality education will be impossible if one simply pours large sums of money or just installs more computers or writes new curricula while teachers are underqualified.

Montri Chulavatnatol (1997: 40), cited in Pillay (2002: 9)

Teachers must come to terms with the stark fact that they too are pupils, seekers of knowledge. The learning process, in many respects, resembles life itself; in order to grow, a life needs to be nourished and nurtured. Complacency stagnates the expansion of knowledge and thus has no place in the realm of education....

Kamolwat Praprutitum (2002: 3)

This section of the report is based primarily on the comprehensive consulting report, "Teacher Development for Quality Learning: The Thai Education Reform Project," prepared by Dr. Hitendra Pillay of the Queensland University of Technology in Australia (Pillay 2002).

### Background: Challenges of a Rapidly Changing Economy

The rapid transformation of the Thai economy from an agricultural-based and low-value added cheap labor economy into a globalized market-oriented diversified economy with a strong and growing service sector has presented major challenges to Thailand and its strategies for human resource development (see Table 1). The new Thai economic landscape demands an increasing number of knowledge workers capable of being life-long learners with good adaptive and problem-solving abilities. The increasingly internationalized nature of the Thai economy as reflected in Table 1

also has important implications for education. To prepare and train such knowledge workers, Thailand's approach to teaching and learning must change significantly. The call for such changes are reflected in the NEA of 1999.

### Historical Context

To prepare teachers for its rapidly expanding educational system during recent decades, Thailand established a mixed system, comprised primarily of university faculties of education and a network of teacher training colleges (TTCs). In fact a teacher training college was built in every other province resulting in a total of 36 such institutions. Faculties of education (FOE) in universities grew rapidly and now number 19. An important feature of this system is that the FOEs and TTCs were administered by different ministries, The FOEs were under the Ministry of University Affairs and the TTCs were under the Ministry of Education. Several decades ago Thailand began to have great success in family planning resulting in much smaller families with eventual dramatic effects on primary school enrollments in particular. Given that Thailand, thus, had excessive teacher training capacity, the TTCs were in the early '90s transformed into special Rajabhat Institutes (which now number 41), authorized to offer a more extensive general curricula in addition to education. They are also now authorized to offer both BA and MA degrees. Rajabhat Institute Suan Dusit is even offering a joint doctorate with an Australian university. In recent years with the rapid growth of private higher education, there is now a FOE at Assumption University, a private institution. Thus, including both universities and Rajabhat Institutes, there are at least 60 different academic programs for teacher education.

There are also a number of institutions, in addition to the above, which also provide in-service training to teachers. In the area of math, science, and technology education, The Institute for the Promotion of Science and Technology (IPST) is the most prominent. Both open universities, Sukhothai Thammathirat (STOU) and Ramkhamhaeng University (RU) also offer in-service training through distance education.

### Major Factors Influencing the Quality of Teaching and Learning

Dr. Pillay (2002: 8) argues that the following key factors have adversely affected the quality of Teacher education in Thailand:

- A lack of dialogue across institutions involved in teacher training, especially between the FOEs and Rajabhat Institutes.
- An authoritative top-down system of supervision which adversely affects the relationship between teachers and management.
- Teachers have had inadequate opportunities to be exposed to the international dimensions of their profession and, thus, they have little opportunity to become acquainted with the latest trends and innovative research in teacher education. Also recent research on the human brain and its functioning is often relevant to the teaching profession (Sansanee)
- There is currently a highly abstract approach to teaching theoretical concepts, which does not translate learning theories into simple and practical language (p. 33).

Pillay (p. 9) then goes on to claim that the quality of both teachers and students has deteriorated significantly. He cites as evidence the poor performance of Thai students in the International Science and Mathematics Olympiad (Pisarn 2001) and criticisms offered by Dr. Thuvasethakul Chadamas, Director National IT Committee Secretarial (Bunnag 2001). While Pillay's assertion could be accurate, it would take rigorous and reliable longitudinal standardized empirical data to support the claim definitely.

### **Thailand's Plan for Teacher Development in Support of Education Reform**

Building on the National Education Act of 1999, the work of the Office of Education Reform, (1999-present), the extensive work of the Teacher Education Reform Office (TERO), the new curriculum of the MOE and extensive related training (DCID), and a previous ADB (1998-1999) TA, the Thai government has developed a major and systematic plan for teacher development in support of education reform. The plan has involved the following key elements:

- Greater unity and coordination of FOEs and Rajabhat Institutes through the restructuring of the Ministry of Education, which involves the merger of the MUA and MOE.
- The establishment of the Office of Teacher Education Reform (TERO).
- The development of a program to identify and recognize national, master, and lead ("spearhead") teachers as a means to enhance the teaching profession and develop a corps and expanding network of learning-reform minded teachers who could assist their peers in becoming more effective teachers. The government has also established a program to identify "Thai wisdom" teachers (to promote local knowledge) and model administrators
- The establishment and work of the Sub-committee on Learning Reform chaired by Dr. Prawase Wasi, resulting in an important monograph on learning reform (ONEC 2000).
- The establishment of the Teacher Development Task Force (TDTF) and the Teacher Training Task Force (TTTF).
- The establishment of the Office of Education Standards and Evaluation (OESE)
- Establishment of the Parents' Network for Education Reform. Interestingly Dr. Kamonpan Cheewapansri, a pediatrician, and the Chairperson of the Network, pulled her three children from the Thai public schools because the children were miserable because of the emphasis on rote learning, to put them in an international school with a student-centered curriculum (*The Nation*, 5/27/02: 5C).
- Development of two new models for pre-service teacher education:
  - 1) (a 4+2 year program (BA or BS and a B.Ed. with a year of professional classroom practice)
  - 2) a 5 year program proposed by the Rajabhat Institutes
- Proposal for a system of teacher licensing and registration. The new system was approved by the Cabinet on May 29, 2002.

- The TDTF has developed a new five-scale teacher classification framework for a new salary structure. The new classification scheme provides for five genres of positions: assistant teacher, teacher, senior teacher, expert teacher, and senior expert. A comparable new scale has been developed for educational administrators. An incremental salary range has been established for each classification. This proposal was presented to the National Education Committee on May 13, 2002.
- On May 4, 2002, a new Association for the Development of the Teaching Profession was launched. It already has over 40,000 members.

### Major Concerns about Teacher Development in Thailand Currently

In his report, Dr. Pillay expresses a number of concerns related to various gaps and problems. With respect to the new teacher development initiatives described above, he is concerned that they have been fragmented with little communication and collaboration among the various groups and task forces (Pillay, p. 18). He finds even inconsistencies in the use of terms and constructs.

He also has some serious concerns about the proposed new pre-service teacher education degree programs requiring five or six years of tertiary study to obtain a degree. Given the goal of trying to attract top students to the teaching profession (NEC 2002: 3.2, p. 2), this new more demanding requirement for a bachelor's in education may be counterproductive. Pillay (p. 21) makes the compelling point that many countries produce high quality teachers in four years. Those advocating the six-year program must seriously consider this critique, since it is imperative for Thailand to optimize the efficiency of its educational system. It should not buy a Mercedes-Benz when a VW may suffice (*setakitpapieng* construct of His Majesty King Bhumibol).

With respect to in-service training, Dr. Pillay is concerned that teachers not be taken away from their classrooms while participating in in-service training. Given Dr. Pillay's harsh critique of the quality of Thai teacher educators and teachers, he naturally places great emphasis on in-service training and argues that the innovative provision of quality in-service training to Thai teachers perhaps is the "biggest challenge to Thai teacher development as it relates to education reform" (p. 22). He sees that the biggest gap in the current system is to "provide quality training in the understanding of the new approaches to learning and educational management" (p. 31).

Dr. Pillay (p.19) is also concerned about a lack of coordination with in-service training providers even within a single Ministry such as the efforts of the Curriculum and Instruction Department and those of the Institute for the Promotion of Science and Technology.

Complicating the provision of quality in-service training is a lack of sufficient understanding of the nature and types of knowledge needed by teachers in the new economy in which there will be increasing needs for knowledge workers. Pillay provides a useful appendix (4) which provides as an example the knowledge types identified for science education for grades K-12 in Australia (p. 28).

Another major concern of Dr. Pillay is the current *lack of incentive structures* to encourage in-service training and quality teaching. He provides valuable data for the year 2001 (p. 36), which indicate that only 1.8 percent of all teachers received a coveted accelerated two step promotion. It was estimated that another 16.2 percent were considered good teachers but could not receive this promotion. Basically this means that the vast majority of teachers receive the same salary increments regardless of performance. Apparently the rate of accelerated promotion for teachers is much less than for other government officials, further contributing to the relatively low status of the teaching profession.

#### Recommendations for consideration related to teacher development in support of educational reform

Dr. Pillay's report contains numerous recommendations worthy of consideration. These can be briefly summarized and synthesized as follows:

- 1) It is critical to inform all key stakeholders of the importance of the new management model as integral to improving learning outcomes for students.
- 2) Given the fragmentation and diversity of actors and stakeholders involved in teacher development, he proposes that a Manual of Policy and Procedures (MOPP) be compiled to delineate clearly the respective roles, functions, and responsibilities of the various actors and agencies involved. He does not elaborate on how such a manual could be created and the nature of its legal status. Technically, the legislation being developed by the OER to implement the NEA should be responsive to this recommendation.
- 3) With the new management model, a *new mindset* is needed emphasizing facilitating not controlling the work of teachers.
- 4) Priority for teacher development should be *school-based* in-service training. A key focus must be in "changing teacher beliefs about their practices." Training must also be *long-term*.
- 5) With respect to the new active and student-centered pedagogy, Pillay suggests that teachers need a range and repertoire of strategies, including but not limited to student-centered learning. This broader model is called *distributed learning* (p. 25). He also argues that to enhance flexibility those being prepared to be secondary teachers should have two, not one subject area.
- 6) There is an important need to create *Local Learning Resource Centers*, easily accessible to students, teachers, administrators, parents, and community members, to facilitate the new model of learning reform.
- 7) It is important to develop *multi-faceted* and clearly articulated and defined incentive systems related to individual and group performance. Given the decentralized nature of the new system, local stakeholders should be given discretion and have ownership in developing incentive systems appropriate to their context and situation (p. 49). Given financial constraints, it is also important to develop various non-monetary award systems as well as suggested by Laeka and Nongklak (1999).

- 8) It is absolutely critical that the methods of assessment be reformed to be congruent with the new models of teaching and learning. Without such alignment, serious unanticipated adverse effects may result from the implementation of learning reform.
- 9) ICT must be more actively utilized to enhance teacher training and also provide a quality EMIS, which would provide a profile on the allocation and distribution of teachers in the Kingdom. ICT can also facilitate the development of a proper balance among local, national, and global/international knowledge, all three of which are critically important in an information age. Given constraints related to English language capabilities, global/international information has often been inadequately accessed.

### Concluding Comments on Teacher Development for Education Reform

The findings of the above report were discussed thoroughly at a workshop of ONEC on May 24, 2002. Commenting on the report were Professor Sumon Amornvivat; Dr. Nonglak Wiratchai; and Dr. Montri Chulavatnatol, President, Kenan Institute Asia, and former director, TERO. The general consensus was that this report was comprehensive and a valuable contribution with numerous important recommendations worthy of consideration.

The following are several major points made by the discussants concerning teacher development in support of educational reform.

- In promoting teacher development more attention needs to be directed to the importance of the "joy of learning," which contributes to life-long learning. How can teachers without the "joy of learning" foster such traits in their own students? Dr. Laeka also stresses the importance of the love of study (2002: 6; see also Sansanee 2000b). This is particularly salient in Thai culture with its emphasis on "*sanuk*" (enjoyment). In fact, Dr. Chai-Anan (1998) has coined a new term, "plearning" meaning play learning to indicate the importance of this often neglected dimension. The *distributed learning* model emphasized by Pillay could certainly foster more joyful learning.
- It is critically important to foster autonomous learning habits among students.
- The call for a National Framework for Teacher Development fails to recognize adequately the extensive related work done by TERO over several years in trying to develop the key elements of such a framework.
- There needs to be more emphasis on the need for people who know *how to manage change*, including the highest level of policy makers.
- The report underestimates the existing abilities of many Thai teachers at all levels.
- In terms of the development of incentive systems and merit performance, much more attention needs to be given to complex bureaucratic issues

related to the essential collaboration of the Civil Service Commission, the Ministry of Education, the Teachers' Council, and the OER, for example.

- The discussion of the Rajabhat Institutes lacks depth and in some cases may be misleading. Their transformation into tertiary institutions offering an increasingly diversified curricula is a complex phenomena, which can not be analyzed simply.

## **The Role of Information and Communication Technologies (ICT) in Facilitating Educational and Learning Reform**

### Background

This section draws primarily on the consulting report, "ICT for Direct Instruction and In-Service Training, written by Dr. John H. Stamper of Pacific Learning Services in Hawaii.

The National Education Act of 1999 specifically (Chapter 9) mentions the importance of promoting information technology as an integral part of learning and educational reform.

With respect to the use of ICT in schools, the general pattern has for such tools to be used in the classroom only after their widespread use in society. Sirin, et al (1999). have provided a valuable history, for example, of the evolution of the Internet in Thailand, which show the growing use of the Internet in the larger Thai society. The now common presence of cybercafes in Thai urban areas is reflective of this trend.

The major constraints to ICT adoption in education in Thailand relate to these primary factors identified by Stamper.

- Limited budgets for the acquisition and maintenance of ICT resources. ICT is often an add-on to regular budgets.
- Limited support from administrators.
- Limited experience of administrators and educators in the use of ICT
- Inadequate utilization of existing resources already in place
- Inadequate software to service existing hardware

Table 4 provides key statistical indicators related to the current ICT situation in Thailand and the country's potential for ICT to improve education.

**Table 4: Key Statistical Indicators Related to the Status of ICT for Education in Thailand**

<b>Statistical Indicator</b>	<b>Value for Thailand</b>
Percent of Total Population Using the Internet	1.6 to 5.6%
Percent of Rural Population using the Internet	0.05%
Primary Schools with Electricity	98 %
Secondary Schools with Electricity	100%
Primary Schools with Telephones	21%
Secondary Schools with Telephones	90%
Number of Computers per School (Primary Level)	2.26
Number of Computers per Student (Primary Level)	1:84
Number of Computers per School (Secondary Level)	19
Number of Computers per Student (Secondary Level)	1:53
Number of Schools with Existing Satellite Receptors	12,000 (primary and secondary)

First, several limitations need to be noted with respect to these data. Given rather quick obsolescence of computer equipment, data are not available on how long on average these computers have been in service. Also, we do not know the extent to which they may be used for administrative, data keeping, and clerical uses, in contrast to use in direct instruction. Also, we do not know exactly how many may be "sheltered" (i.e., protected for fear they may be damaged, misused, or stolen).

These data suggest that Thai secondary schools have considerable potential for Internet connectivity with conventional phone dial-up. However, both costs and bandwidth problems may limit the efficiency and utilization of such systems. The same is not true for primary schools, since they rarely have telephone connections. These data also suggest that Thailand has considerable potential for use of satellite technology to promote ICT use. Thailand is extremely fortunate to have access to the Thai-Com 3 satellite which has excess unutilized capacity. Also its footprint extends beyond Thailand to cover other areas of Asia such as neighboring Laos, Cambodia, Vietnam, and Myanmar, part of the important Mekong sub-region.

To promote the use of ICT, the Thai government has supported the development of a number of network projects:

- SchoolNet started in 1995 with a pilot project of 50 schools. By 2002, the project will connect 5,000 schools.
- UniNet is a system of the Ministry of University Affairs which connects all public universities through a fiber optic backbone.
- EdNET is a network designed to link all public schools and higher education institutions. The implementation phase began in 2002. SchoolNet will eventually emerge into EdNET.

- By the end of 2,000 the government plans to expand the Internet network for rural areas beyond the existing 3,500 tambols to 7,500. This is a regional project launched by the ASEAN Secretariat (*Bangkok Post* 5/27/02: 3).

Thailand has considerable and extensive experience with ICT in education, particularly distant learning utilizing radio and television. In the early 1980s Thailand received a major World Bank loan to strengthen radio education and the Center for Educational Technology (part of the Department of Non-formal Education). Sukhothai Thammathirat University (STOU) as an open distance university has made extensive use of television educational programming and has its own television Channel 11. The other open university, Ramkhamhaeng, has been active in promoting and developing on-line Internet courses. The Distance Learning Foundation in Hua Hin, has actively provided live, interactive teaching training through satellite-delivered video to respond to areas with serious teacher shortages.

### Important constructs in ICT

#### *Computer Literacy*

Though microcomputers have been in schools since 1978, internationally there has been considerable debate about exactly what ICT skills students need to be "computer literate" (see Roblyer 1992; ISTE 2002). Dr. Stamper's Appendix II provides additional references related to the important issue of computer literacy.

#### *Computer Self-Efficacy*

This important construct relevant to both learning and the use of computers refers to basic attitudes and beliefs about one's capabilities to accomplish specific tasks effectively. There are numerous teachers in any country with a low sense of self-efficacy as it relates to computers. They may have some combination of "computer anxiety" or "technophobia". The inability to type may also be a contributing factor to aversion to working with computers. The failure of technical things to work properly also makes teachers averse to using new technologies in front of their students.

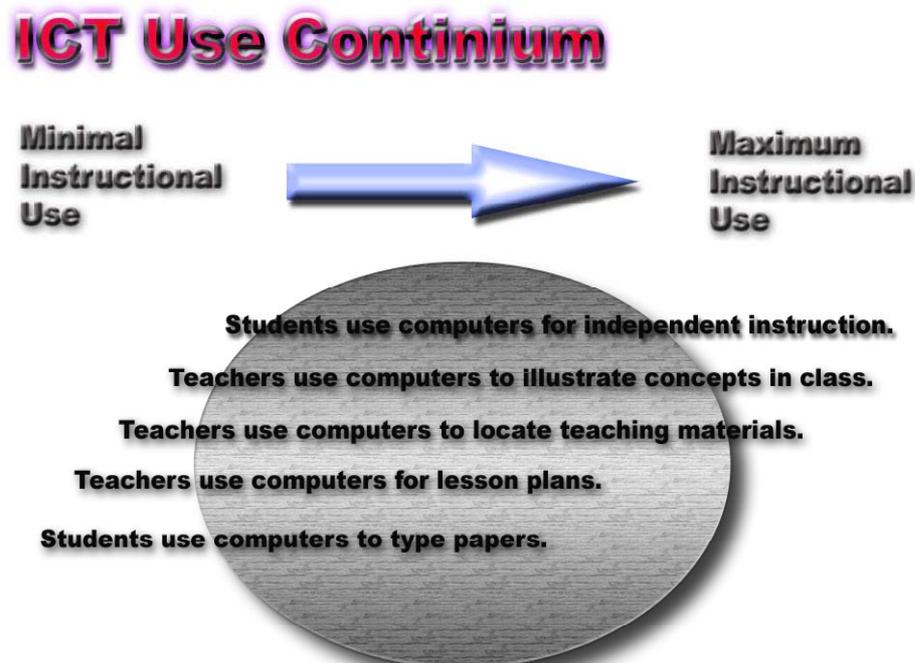
#### *Technology Standards*

It is only recently that specific standards have been established for the technology area. The U.S. published standards for use of technology in 1998, coming out of the National Technology Standards (NETS) project. Other organizations have also established standards for teachers and schools.

### Genres of Utilization of Computer Technology

Figure 2 provides a useful continuum indicating the extent to which computers are actually used in direct instruction. Based on schools visited for this project, Dr. Stamper concluded that in most instances there was only minimal use of ICT for direct instruction by teachers and students.

Figure 2: Genres of Utilization of Computer Technology (Stamper)



### An Integrated Approach to ICT Utilization

It is important to keep in mind that ICT involves multiple and diverse technologies, not just the computer and the Internet. It also includes such technologies as television, CD-ROMs, video, radio, and audiotapes. The distinct and highly innovative (at the time) approach that transformed the Thai company, Shinawatra Inc., into a major transnational telecommunications conglomerate was its *integration* of computers, broadcasting, and telephone technologies (Fry and Boonterm 1997). One major advantage associated with satellite technology such as ThaiCom 3 is that it enables easy down-streaming of diverse media such as the Internet, television, videos, and audio.

At any school a direct broadcast dish antenna and satellite receiver can connect a local server to the ThaiCom 3 Satellite. Such a server could provide state-of-the-art access to the Internet, videos for on-demand playing, software applications, electronic libraries, computer assisted instruction, and a wide range of multimedia materials for use by administrators, teachers, students, and potentially community members. Given concerns about English language training needs in Thailand, two concrete examples in that arena might be helpful. In Osaka, Japan, they have developed CD software for the fun learning of English through colorful animation and action. Students think only in English and are exposed to perfect pronunciation. Such software could be easily downloaded under the proposed system to schools throughout Thailand. Another concrete example is the computer game, "crossword," being used by students at St. Gabriels College, which enhances English, math, and thinking abilities (*Matichon* 5/29/02: 32)

### *Relevance of the system to learning and education reform*

Such a system could respond directly to the daunting challenge, identified by Dr. Pillay to provide long-term site-based in-service training to a huge number of teachers, essential to implement effectively the new learning reforms. Such a system would also provide a major stimulus to the private sector to compete to develop educational materials for such ICT use throughout the Thai school system. UBC in Thailand has extensive dubbing capabilities to convert materials into high quality Thai language. The system could also greatly facilitate the in-service training of school administrators.

### *Relevance of the system beyond education*

Such a system need not be limited solely to use by the education sector at the local level. The learning centers or laboratories containing the multimedia equipment could be open to the larger community, providing them with important access to information related to health and agriculture, for example. Important locally identified and/or created wisdom and knowledge could also be up-loaded into the system. Local communities could also use the system for e-commerce to promote the products in which they have a special comparative advantage.

### *Relevance of the system beyond Thailand: proposal to establish the Asia Education Network (AEN)*

Many of Thailand neighbors such as Laos (see Teera 1999) and Vietnam (see Paitoon 1997) are also in the process of undertaking educational reform. Given the remoteness of many Lao rural communities and the mountainous nature of the country, access to modern conventional communications is limited. Thus, satellite communication is extremely relevant to Laos. Myanmar has many similar conditions. Cambodia also has an extremely weak conventional physical infrastructure because of years of war. Thus, the ThaiCom 3 Satellite has direct relevance to them. Currently countries of the Greater Mekong Sub-region (GMS) are actively cooperating in a number of arenas.

Thus, Dr. Stamper presents a vision of implementing this new Asian Education Network (AEN) over a period of five years, with an initial three-year prototyping in Thailand. Given the cost of a large infrastructure project of this nature, Dr. Stamper argues that a regional project will have greater chances of receiving concessional funding from donors such as the World Bank or Asian Development Bank, because of its inclusion of countries eligible for such funding, where leapfrogging in the ICT area is both appropriate and needed. In Cambodia, already impressive results have been obtained in a remote village using a satellite powered by solar energy, demonstrating the leapfrogging (quantum leap) potential. In Cambodia, as per Dr. Stamper's vision, the ICT system is contributing to many aspects of village development, not education alone. One area of great importance to the GMS group is the collaborative tourism development. The potential e-commerce dimension of the proposed system could make valuable contributions to that initiative.

If the Asian Education Network idea were to be implemented, it is extremely important for the Thais involved to emphasize that it is a regional collaboration of

equal partners. Thus, it should be under the authority of some regional auspices such as ASEAN, SEAMEO, RIHED, or UNESCO. Otherwise, they might be concerns among Thai neighbors that this is a project to extend Thai political and economic dominance in the region. It would also be essential that learning and educational materials be dubbed into proper Lao and Khmer, for example.

Dr. Stamper's consulting report contains extensive technical details on the equipment and related costs needed for such a system.

Dr. Stamper's report was discussed at a special meeting at the ONEC on May 24, 2002. Ms. Doris Wibunsin, Executive Director the National Technological University/Thailand and Manager of the Thailand Training Network; Dr. Chadamas Thuvasethakul of NECTEC and SchoolNet; Dr. Wuttipong Pongsuwan, Advisory Committee to the Prime Minister; and Dr. Wipa Chalerm-Panatarak of Sukhothai Thammathirat University all commented on Stamper's report. While there was general enthusiasm for his visionary approach and his technical knowledge of ICT, a number of issues were raised which can be briefly summarized as follows:

- The system proposed by Dr. Stamper is clearly state-of-the art with the most current technologies. Does it necessarily need to be state-of-the art? For example, to what extent can recycled equipment be used as a means to reduce costs? Instead of the advanced high tech mobile units for installation, maintenance, and service, could not "*Chang Sarasontet Wibaak*" ("barefoot IT technicians" on motorcycles be used to achieve the same basic purposes. Thus, much money could be diverted from purchasing excessive expensive equipment to training technicians, and at the same time providing important gainful employment for those in rural areas.
- How cost-effective and self-sustaining is the proposed system? That needs further elaboration and support. There is also some concern that the prototype project is much too ambitious in terms of number of schools to be involved. The actual choice of such a large number was based on their already have access to satellite receivers.
- It is important to distinguish ICT as a subject to be studied (how to use the computer) and the much broader role of ICT as a tool to enhance leadership, management, teaching, and student learning, It is the latter which is being emphasized in this report.
- It is critically important to involve the private sector in developing the proposed system. To what extent could their network of cybercafes be an ICT resource for local communities?
- Children in really remote areas have ability and potential, but they simply lack opportunity to transcend the knowledge and digital divide. The proposed system has the potential to help level the playing field by giving the most remote and disadvantaged communities access to the most cutting edge data and information through connecting them to an existing satellite.
- There is always a complex "chicken and egg" problem in discussing technology initiatives. It is critically important to invest in people and training them to use new technologies to ensure the optimal use of new technologies. But to train them appropriately it is often essential to actually have the hardware and

technologies. Thus, perhaps the optimal approach in any ambitious ICT project of this nature is to follow a kind of middle path with a balance between investing in the development of people and purchasing new equipment and software.

## **The National Pilot Project**

### **Pilot Project Overview: New Approaches to Learning and School-Based Management**

#### Project Objectives

The goal of this pilot project was to try out on a significant scale both learning reform and school based management mandated by the National Education Act of 1999. This provided an opportunity to test the feasibility of these new approaches and identify possible problem areas or obstacles which might emerge. A key element of the project was to evaluate systematically and continuously the outcomes of the multi-faceted project. Given the need to adopt such a system nationally, it was critically important to assess the pilot project in the most rigorous and reliable way possible.

#### Operating Assumptions

A basic assumption was that schools throughout Thailand at all levels and in all regions are ready to undertake the reforms called for in both the 1997 Constitution (Section 81) and the 1999 National Education Act and that they are capable of implementing such ideas at the local level. A second key assumption was that the project ideal was a bottom-up not a top-down approach to change. While general guidelines and some financial and academic support were to be provided from above, the actual changes and innovations would be determined and designed at the local level. A third major assumption related to the nature of "supervision" provided. The assumption here was that a new model of collegial, collaborative, and consultative "supervision" would be more effective than the traditional mode emphasizing control and inspection, which often leads to fear, anxiety, and defensiveness. A fourth assumption was that change should be introduced in an *integrated* framework and not on a gradual piecemeal basis. Thus, this made the project extremely ambitious. A fifth assumption was to keep the process of the project simple and to avoid unnecessary complexity. A sixth assumption was that it would be possible to demonstrate significant changes in belief systems and behaviors among administrators, teachers, students, and communities even during a limited nine month time frame.

#### The Learning Reform Movement in Thailand

"Learning reform is at the heart of education reform."

Dr. Prawase Wasi (ONEC 2000: I).

In recent years leading up to the National Education Act and subsequent education reform, a learning reform movement has gained considerable momentum. As stipulated in the NEA, learning reform is viewed as integral to education reform. ONEC has also been active in identifying key figures in progressive pedagogy and

then publishing volumes related to learning reform, emphasizing student-centered and active learning. Among the most influential thinkers in this area have been Dr. Prawase Wasi who chaired the MOE and ONEC Sub-Committees on Learning Reform (see Prawase 2000, 1998; ONEC 2000). Professor Sumon Amornvivat (2002, 2001a,b, 1998) has also pioneered a star model of teaching and learning. She also emphasizes the critical importance of moral education (1998). Another important progressive pedagogical thinker is Dr. Tisana Khemmani (2001; 1998) whose major interest is in improving the thinking capabilities of learners. Dr. Sansanee Chatkupt (2001a,b), a neurological physician, has drawn upon her in-depth knowledge of brain research to apply latest findings to improving learning processes. Her work has focused on critical thinking, the utilization of brain capacity, and joyful learning. Dr. Sansanee is providing valuable assistance to the Department of Curriculum and Instruction Development as they train teachers to use the new 2001 curriculum. Dr. Chai-Anan Samudavanija (1998), a noted Thai political scientist and now director of the prestigious Vajiravudh College, has developed the concept of P-Learning, that is, play-learning, similarly stressing the need to make learning fun and enjoyable. Dr. Pillay's emphasis on the construct of distributed learning provides a useful framework for integrating these progressive pedagogical ideas.

### Some Major Misunderstandings about Student-Centered Learning

There is a tendency to equate student-centered learning with activity-based learning. While activity based learning can be a valuable part of student-centered learning, it is only one of multiple methods that can be used to promote active and student-centered learning (see Tisana 2001). Another misreading of this approach is to assume that it rejects all memorization. Actually, in some situations such as learning other languages, memorization can be an important part of learning. What is to be eliminated is mindless, mechanical rote memorization often of material which can be easily accessed through modern research tools. Another common misconception is that in student-centered learning somehow the teacher's role and status is diminished or minimized. Actually the organization and careful planning of student-centered learning is extremely demanding of teachers. Also developing questions to encourage *divergent and critical thinking* is a challenging activity. Finally, student-centered learning does not in any way mean a relaxation of standards or rigor. This approach if implemented well, should enable students to develop even stronger skills in basics such as reading, writing, and mathematics, since they are provided with more opportunities to use and develop such skills.

### Description of the National Pilot Project

Implementation of the pilot project was facilitated by a major grant from the Asian Development Bank. Funding from the ADB, also enabled the ONEC to engage four local Thai consultants to take responsibility for the design and assessment of this pilot project. They were Dr. Laeka Piya-Ajariya, whose responsibility was school reform model and the technical assistance model of the R & D teams; Professor Sumon Amornvivat, whose responsibility was in the area of learning reform; Dr. Boonmee Nenyod, whose focus was school based management; and Dr. Nonglak Wiratchai, whose responsibility was evaluation and assessment (ONEC 2002). The three international consultants also studied and commented on the Pilot Project in their respective consulting reports. In describing, analyzing, and interpreting the Pilot

Project, this report draws primarily on the extensive and detailed four reports in Thai of the four local consultants (Laeka 2002, Sumon 2002, Boonmee 2002, and Nonglak 2002).

Schools from throughout the Kingdom at all levels of fundamental education (grades 1-12) and under diverse administrative units were informed of the opportunity to participate in the pilot project. 3,800 schools applied to be in the project. After the review of the applications, 253 schools were selected for participation in the project. Only three schools dropped out of the project, leaving 250 participating schools. These schools are under the following administrative authorities: ONPEC, DGE, BMA, OPEC, and MOI (municipal schools). Table 5 provides a detailed profile of the participating schools. The schools participating in the project have 10,094 teachers and serve 224,471 students. Thus, this represents a large pilot project. This pilot project built on an earlier year 2000 pilot study of 25 schools.

**Table 5: Profile of Participating Schools**

<b>Administrative Authority</b>	<b>Region: Central</b>	<b>Northeast</b>	<b>North</b>	<b>South</b>	<b>Bangkok</b>	<b>Total</b>
ONPEC	50	32	37	21	2	142
DGE	17	26	13	13	4	73
OPEC	5	2	2	3	2	14
MOI/ Municipalities	3	6	2	2	-	13
BMA	-	-	-	-	5	5
Border Police	-	1	-	1	-	2
Religion	-	1	-	-	-	1
<b>Total</b>	<b>75</b>	<b>68</b>	<b>54</b>	<b>40</b>	<b>13</b>	<b>250</b>

Schools accepted for participation in the project received two primary types of assistance. First, they received a small discretionary "micro-block grants" of 20,000 to 40,000 *baht* to facilitate innovative initiatives and the conduct of the pilot project. Importantly, *targeting* was used in deciding upon differential grants. Smaller more remote schools received more funding than larger more well-off schools. Participating schools also received technical assistance from special local research and development teams, of which there were 44. The local R & D teams were comprised of 80 educators from 28 different Rajabhat Institutes, 10 university faculties of education, ONPEC, and 20 support staff from ONEC. On average, each R & D team was responsible for approximately five to six schools. The R & D teams provided orientation to each of the schools and were available for subsequent frequent consultation as the project unfolded. Schools also received assistance from Master Teachers.

Each participating school was provided a basic framework to guide their activities and implementation of learning reform and school based management. They were provided a simple PDCA (plan, do, check, and act) model to facilitate their work. There was also emphasis on the development of projects as a valuable mechanism to introduce student-centered learning, though schools were not mandated to use the project approach, many did decide to utilize this approach.

The Pilot Project had three distinct phases:

- Phase I: **Refinement of Student Centered Learning Construct**, December 2000-April 2001: Conduct of four regional workshops to refine the construct of student-centered learning. Participants were members of the 44 R & D teams, administrators and coordinators from the pilot schools, and staff of ONEC. In these workshops there was a strong emphasis on the *diversity* of approaches to school-based learning reform.
- Phase II: **Whole School Learning Quality Assurance**, May-October 2001: Organization of two follow-up workshops and four wrap-up workshops to help monitor and assess the school reform process in the pilot schools.
- Phase III: **Networking and Scaling-up of School Reform**, November, 2001, May, 2002: 250 pilot schools expected to work collaboratively with at least five to 10 nearby partnering schools on a volunteer basis.

### Project Methodology

The research and evaluation methods design to assess the outcomes of this pilot project were both sophisticated and rigorous. The three key underlying elements of the design were:

- Inductive approach
- Maximum variation sampling
- Use of triangulation and multiple methods (qualitative and quantitative) in assessing the outcomes of the pilot project

Prior to the initiation of the project, the research and evaluation team did not have an a-priori theory or conceptual model to test with this project. Instead the goal was to ascertain the range and diversity of innovative approaches to student-based learning which might emerge to response to the differential needs of schools around the country. A second important goal was to capture the richness of those experiences and derive insights and understandings about the process of whole school based learning reform. In this sense, the methodology underlying this project was basically inductive (Sumon 2002: 16).

The sampling strategy for this project also was designed to reflect the special context of the Pilot Project as a national applied experiment with rather radical changes in behaviors and mindsets anticipated and expected. Thus, the schools selected ("the sample") were based on what is termed a *maximum variation sampling design* (see Merriam 1998). The goal was to have as diverse representation of the different genres of schools existing in Thailand as possible. Thus, there were schools selected from all regions of Thailand, of all sizes, and under different administrative authorities. A major mistake in many evaluation studies is to conclude that an innovation is a failure when in fact the changes being assessed were not actually being implemented in any meaningful way. To avoid this potential problem, schools were selected which demonstrated in their proposals both a capability and commitment to implement school-based learning reform.

Another key element in the methodology has been the utilization of *triangulation and multiple methods*, and the mix of quantitative and qualitative research methods, as a means to enhance the rigor, validity, and reliability of the assessment. Many multiple data sources have been used. Given the limited time frame of the Pilot Project (nine months) the focus of the evaluation was on process and intermediate outcomes. Of special importance were both behavioral changes and reflections on the use of new learning and school management approaches. Such *reflexivity* on the part of local educators is a central feature of this assessment. The key methods and related data sources are indicated below:

- Eight sets of questionnaires involving surveys of students, teachers, and administrators. These data are analyzed quantitatively using such techniques as analysis of variance, analysis of gain scores, and exploratory data analysis.
- In-depth interviews of key individuals at the local level.
- Focus groups (a total of 16) conducted in each region of the country with key participants in the Pilot Project.
- Observations by the researchers and visiting R & D teams
- Special poster sessions
- Three reports submitted by each of the participating schools, including data from both teacher journals and teacher classroom research
- Reports of the 44 R & D teams.
- Results of the various workshops, but especially the wrap-up workshops of phase II.

Thus, in a period of less than a year, a massive amount of data was collected and subsequently analyzed in the reports of the four local Thai consultants. The multiple methods approach to understanding local phenomena developed by the R & D team is extremely responsive to both Guy Gran's call for participatory development and Robert Chambers' Participatory Rural Appraisal (PRA) (1996), which stresses genuinely listening to the people and putting the last first.

#### Examples of Concrete Student Learning Activities Identified

Professor Sumon Amornvivat (2001) in her extensive and detailed consulting report, "Learning Process Reform of the Pilot Schools: Selected Models," (in Thai) provides a thick description of the impressive *diversity* of learning activities developed in the Pilot Schools. For the most part they involve cooperative and experiential learning, often with an interdisciplinary dimension. There is also a strong emphasis on providing students the opportunity to present (both in written and oral forms) the results of their various projects. There is a strong element of writing across the curriculum. Many of the projects developed also involve an exploratory research element.

The following are some concrete examples of the types of learning activities undertaken by the Pilot Schools:

- Students visited a national park and studied bio-diversity there.
- Students experimented with making paper from banana leaves.
- Students used English in communicating directly with foreigners both by phone and in person.
- Students were learning to make *batik* textiles.
- Students made use of unused factory land for growing crops and developing a fish pond, and actually made profits from their activities.
- Students learned mathematics tables by studying and comparing trees.
- Students took responsibility for developing several religious ceremonies, including preparing invitation cards and inviting monks.
- Students initiated a "Green Industry" project to link their school to a nearby factory to enhance the environment.
- Students surveyed local herbs and studied their medicinal properties and how they are being used locally.
- Students developed diverse interest groups such as recycling and flower arrangement.
- Students experienced integrated learning by utilizing local learning resources such as temples, museums, and factories.
- Students did research on their history of their province, Phetchabun.
- Students experimented and then built an instrument for discovering underground water.
- Development of an interdisciplinary "Five Stars for Success" program involving environmental, high technology, moral, and social elements.
- Learning a local language, Tai Yuan.
- Undertaking a project "Mothers with Benevolence" which was integrated across the curriculum involving math, Thai, and English components, for example. Relevant to the extremely important modern issue of parenting.
- Development of an Academic Exploration Center with 11 corners, including, for example, a corner on invention, critical thinking, and emotional intelligence.
- Development of a "Thai 606" project promoting diverse performances in Thai such as preparing radio programs, writing magazine articles, and writing fiction.

### Common Themes

In Table 6, various themes and concepts are identified which frequently occurred in the various reports about the Pilot Project. No formal quantitative assessment of the number of occurrences was tabulated. Constructs and themes which seemed to have the most prominence are indicated in bold. The theme of *diversity* was certainly pervasive as schools developed extremely varying approaches to promote student-centered learning, though such diversity was less salient for large schools in or near

urban areas under the authority of the Department of General Education. Related to Professor Sumon's construct of *kalayanamit* (amicable supervision) as an alternative to top-down directing/controlling supervision, a construct which could be termed the 3Cs is reflected in the Pilot Project, namely, *collaboration and consultation for creativity*. Many of the activities initiated by schools had either the theme of environmental or cultural preservation. Many also had an integrative learning dimension, such as environment across the curriculum, local knowledge/wisdom across the curriculum, or Thai language across the curriculum. Different kinds of partnerships were also an important common theme. Among such important partnerships were school and community, school and the R and D teams, schools sharing with other schools, administration and teachers, and among the teachers themselves.

**Table 6: Themes/Concepts Frequently Mentioned in Evaluation/Research Reports on the National Pilot Project**

<b>diversity</b>	<b>empowerment</b>	<b>creativity</b>
<b>integration</b>	teamwork	<b>partnerships</b>
dialogue	innovation	consultation
<b>amity</b>	research	<b>local knowledge/wisdom</b>
<b>environmental preservation</b>	<b>cultural preservation</b>	leadership
collaboration	problem-solving	<b>links to real life (authentic learning)</b>
<b>community links</b>	cooperation	reflexivity ( <i>khit pen</i> )

### Major Quantitative Findings

The major quantitative findings were analyzed in meticulous detail by Dr. Nonglak Wiratchai. There were three primary types of quantitative data:

- Data on several key background variables such as the characteristics of the principal, the teachers, the school, and the community.
- 14 composite indicators pertaining to professional development, the teaching and learning process, authentic learning assessment, quality assurance, school-based management, and perceptions related to the progress of school reform.
- 8 composite indicators related to the National Education Act

A key element in the quantitative design was to *assess change* by comparing pre- and post-project scores on the various key indicators. The quantitative data analysis indicated that there were significant positive changes on every indicator (see Table 7). Using the coefficient of variation as a measure of inequality, it was also found that there was less inequality on every post-measurement indicator compared to the pre-measurement indicator.

**Table 7: Analysis of Key Indicators Related to Learning Process (Students)**

<b>Indicators</b>	<b>Average prior to project</b>	<b>Current average</b>	<b>T value</b>	<b>Gain score (absolute)</b>	<b>Gain score (percent)</b>
1. Had the opportunity to learn from reality outside the classroom and school.	2.87	3.26	62.23**	.39	13.6
2. Had the opportunity to use tools, equipment, instruments, and other materials in studying.	3.03	3.35	55.91**	.32	10.6
3. Had the chance for actual practice and then to present the results of my work in various ways in accord with my ability.	3.00	3.35	57.83**	.35	11.7
4. Had the chance to do things sufficiently so that I could think by myself about which methods to utilize.	2.95	3.29	56.75**	.34	11.5
5. Had the opportunity to see good examples of moral and ethnic behavior.	3.07	3.35	50.42**	.28	9.1
6. Had the opportunity to improve myself in a good way.	3.10	3.41	52.05**	.31	10.0
7. Had the opportunity to search for data both from my school and outside the school.	2.97	3.32	57.95**	.35	11.8
8. Had the chance to practice thinking about alternative ways and methods.	3.01	3.37	60.09**	.36	12.0
9. I am able to think and express myself clearly and with reason.	2.99	3.33	57.42**	.34	11.4
10. Had the chance to experiment with methods to solve problems by myself.	2.98	3.33	58.46**	.35	11.7
11. Had the chance to cooperate with and exchange ideas with fellow students.	3.07	3.43	58.40**	.36	11.7
12. Strong interest and motivation to know and I am happy in my study.	3.13	3.44	53.15**	.31	9.9
13. Had the chance to practice discipline and responsibility in successfully completing My work.	3.13	3.45	54.43**	.32	10.2
14. Had the chance to practice to assess my work and to have practice at evaluating and improving myself.	3.01	3.37	59.18**	.36	12.0

\*\*p < .01, N = 14,313

Dr. Nonglak also used analysis of variance to ascertain if there were differences in the gain scores indicated in Table 7 associated with region of the country, type of school (in terms of administrative control), and those responding to the survey instrument (administrators, teachers, and students). Her analysis indicated that there were statistically significant differences among many of these groups. Her analysis is summarized in Table 8.

**Table 8: Gain Scores for Students by Category**

<b>Indicator</b>	<b>Category/Group</b>	<b>Gain Score</b>
Perceived Learning Process of Students	Administrators	.86
	Teachers	.22
	Students	.45
	Central Region	.41
	Southern Region	-.06
	Northeast Region	.28
	Northern Region	.43
	ONPEC	.41
	DGE	.25
	OPEC	.37
	BMA	.41
	Municipalities and others	.29

There are several important interpretations of these data. The schools in which there is the most perceived positive change in students' beliefs and attitudes about the learning system are those under the administrative authority of ONPEC, BMA, and OPEC; and those in the northern and central region of the country. For those schools in the south, there were basically no significant shifts in values and beliefs. With respect to who provides the data, administrators perceive the most change, while teachers see the least, with students in the middle. Dr. Nonglak provides much additional statistical analysis of these data in her full-length consulting report.

### Qualitative Findings

Perhaps the most important overall finding was that a decentralized approach to learning and school reform was indeed feasible and often enthusiastically pursued. The Pilot Project also clearly demonstrated the feasibility and importance of curricular decentralization. Many participating schools initiated impressive creative and diverse learning activities, often focusing on environmental and/or cultural preservation. Overall, the Pilot Project inspired considerable innovation and creativity.

A key research and evaluation question was to assess the factors associated with the successful adoption of the new approach to learning and school management. Those factors, based on the research and evaluation of the Pilot Project are identified below:

*Patterns of school success in implementing whole school learning reform and school based management*

With respect to their success, schools in the Pilot Project can be divided into three basic categories and five patterns. The first category is a group of those schools that have carried out significant reforms and that can now operate quite independently. Such schools were found to represent approximately 25% of the total (Laeka 2002: 68). For these schools there were two basic patterns: the first were schools which tended to follow closely the guidelines and dictates of their administrative authority and received solid administrative support from them. The second pattern were schools which were innovative and acted independently. The second category of schools is a group of schools which achieved some partial reforms, but still are in need of support and technical assistance. They represented approximately 65 % of the total. The two patterns found for this group are extremely similar to that of the first group. The third category of schools want to reform and they are just starting their own initiatives. They constitute approximately 10 % of the total and they follow the second pattern described above.

*Factors Related to the Success of School-Based Management in the Pilot Project\**

Boonmee (2002: 22) found the following four factors to be the most important in explaining the extent to which a school was successful in implementing SBM. The most important factor was the determination, motivation, and confidence of the school principal. This finding is consistent with international research across sectors, which indicates the critical importance of leadership in explaining any organization's success. The second most important factor also related to leadership is the capabilities of the principal. The third factor is the nature of the school's internal and external relations. The fourth factor relates to the extent to which new initiatives are consistent with local culture and customs and those of Thailand itself.

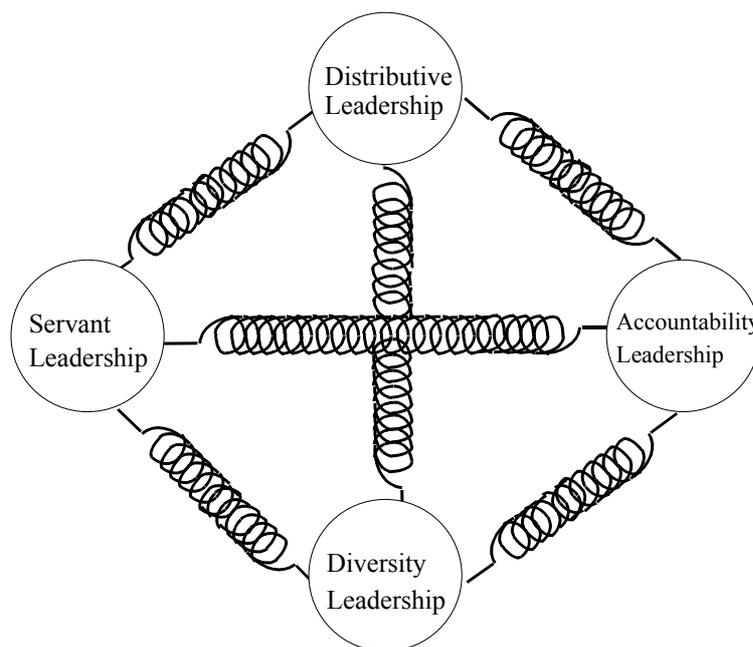
*Factors related to the success of whole school learning reform*

Laeka (2002: 5) also identified factors contributing to the success of whole school learning reform. With respect to leadership style, it appears to be much more effective for principals not to delegate authority to only one or two individuals, but instead to share power and authority with larger teams, which results in much more buy-in. In the international literature this is commonly called *distributive leadership*. A second important factor relates for the need for those engaged in reform to have mutual trust and understanding. Shared "ownership of a school" and a shared vision are critically important and contribute to responsibility and accountability. Third, mutual learning and teamwork are critically important as is a commitment to the evaluation of quality. Fourth, support from the school's administrative authority to undertake a diversity of approaches is another important factor. Finally, another factor is the extent of collaboration with the community and their support.

A well-known (but not Chinese as often misunderstood) proverb states that a single picture is worth a 1,000 words. As a means to show vividly key insights, ideas, and understandings emerging from the inductive research and development approach of the Pilot Project, Figures 3-5 and 7-9 present a set of six tetrahedrons. The

tetrahedron actually comes from the field of physics (Sippanondha and Fry 1981) and is useful in conveying complex interrelationships among four key factors. Given Thailand's neglect of the field of science and mathematics mentioned earlier, it is appropriate to use these symbols also as a metaphor with multiple meanings, one being the critical importance of science development. The first tetrahedron presented (Figure 3) reflects a model of leadership derived inductively from Pilot Project 250 with four key elements: distributive leadership, servant leadership, accountability leadership, and leadership for diversity.

**Figure 3: A Model of Leadership Derived from the National Pilot Project**



### Other Important Qualitative Findings

Several other findings can be summarized briefly as follows:

- Despite stereotypes to the contrary, the age of teachers tended not to be an important factor in implementing school-based learning reform and school-based management. Also size and place of school seem unrelated to chances of success.
- Community-school relations were much stronger in remote areas and among smaller and middle-sized schools. They also made more use of local knowledge.
- It was most effective for principals to delegate authority to teams of at least three or more individuals.
- Participating schools are enthusiastic about the possibility of helping other schools.

- The system of amicable consultation/collaboration ("supervision") reduced the anxiety of teachers. They are consequently more open to being evaluated and using such evaluations to improve their teaching.
- The project significantly stimulated teachers' interest in pursuing further training.
- The Pilot Project often changed the organizational cultures of schools in a positive way. For example, teachers were spending more time at their schools because of the positive climate developed.
- Teachers came to know their students better as individuals.
- Rajabhat and university educators participating on the R & D teams greatly enhanced their understanding of the realities of rural education in Thailand, which in turn affected their own teaching and made it much more relevant to their students.

The following were the major problem areas, obstacles, or unintended consequences identified during the Pilot Project:

- Some national or master teachers helping in the project became overwhelmed and their own school and students suffered because of the many external demands on their time with their being part of the network for educational reform.
- Transfers of principals and/other educational administrators destroys continuity and adversely affects the timely implementation of reforms (see also DGE 2002: 10).

### **Major Lessons Learned from the National Pilot Project and Special Insights, Understandings Emerging**

First and most importantly the unity/diversity formula worked well. This concept relates directly to the new hybrid curriculum responsive to the NEA, which emphasizes both national and local knowledge. The NEA itself, the key constructs of whole school student-centered learning, school-based management, the PDCA model, and an emphasis on developing doable projects provided a common unity and frame for the project. Within that broad frame, schools were given great discretion as to the kinds of learning activities and programs they would developed based on this own distinctive local distinctive needs.

Second, at times educators and administrators, particularly in Bangkok, express skepticism that those in the rural areas are ready to be on their own with school-based management and locally developed learning pedagogies and curricula. They argue that they lack readiness for decentralized management systems. The National Pilot Project has clearly demonstrated broad based readiness for the decentralization mandated in both the 1997 Constitution and the 1999 NEA. With appropriate caring, amicable orientation and guidance, schools around the country are certainly capable of implementing learning reforms and school-based management effectively.

Third, the National Pilot Project indicated the critical importance of leadership and the need for effective management for change at all levels. The system of leadership

which was found most effective was that in which the leader genuinely shared power and responsibility with numerous individuals. The Thai findings are actually quite consistent with the construct of *distributed leadership*, a cutting edge concept being currently systematically studied by the School of Education and Social Policy at Northwestern University with support from the National Science Foundation and the Spencer Foundation.

Fourth, if local schools are *empowered* through school-based management, the Pilot Project demonstrated that they have impressive potential for demonstrating both creativity and innovation.

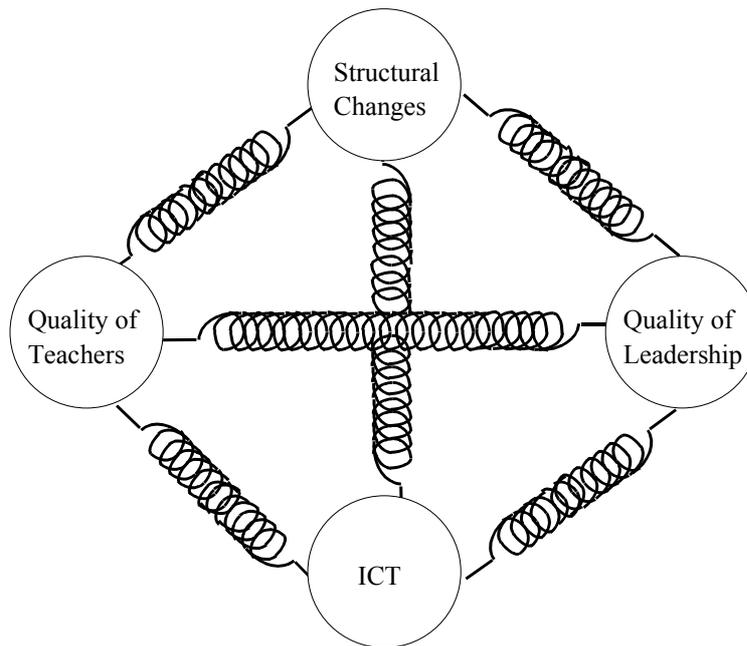
Fifth, the Pilot Project demonstrates that schools can be happy, convivial places that provide opportunities for more effective learning (see Sansanee 2001b).

Sixth, many of the projects and activities undertaken during the Pilot Project clearly demonstrated the practical realities of "schools without walls" which can provide authentic learning through greater experiential education. It was demonstrated well that such an approach effectively engages students.

The tetrahedron in Figure 4 represents the key interrelated elements for successful educational reform, namely:

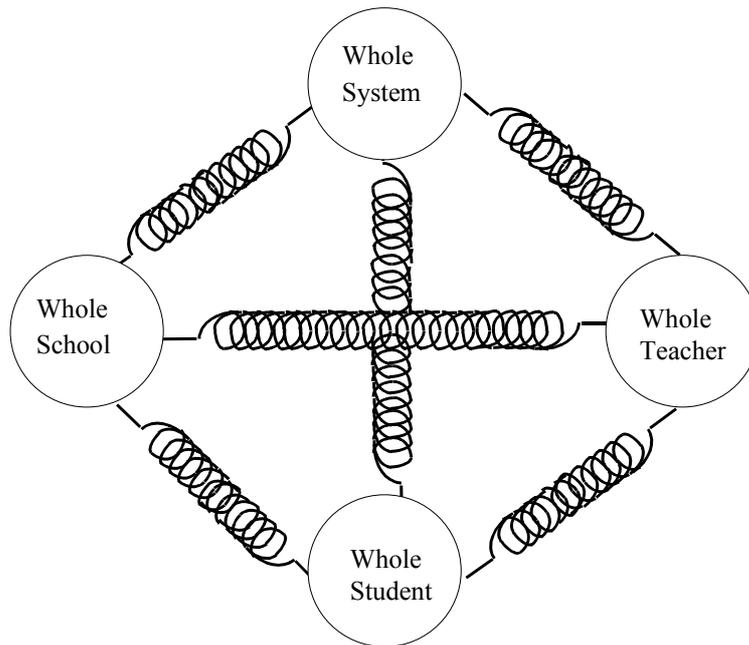
- **Structural Changes**-re-engineering the basic organizational structure of education to minimize redundancies, enhance coordination, improve efficiency, and to decentralize power and authority.
- Improving the **Quality of Educational Leadership**. High quality leadership and management for change at all levels is central to learning reform and school effectiveness.
- Improving the **Quality of Teachers**. High quality teaching is also central to learning reform. Life-long *teacher learning* and development is critically important.
- **Enhancing ICT** not as an end in itself, but as a powerful tool to improve the efficiency of the educational management system, to enable school principals and administrators to be more effective and creative leaders, and to facilitate teachers becoming life-long learners who can inspire their students to also become life-long, autonomous, and joyful learners.

**Figure 4: Key Interrelated Dimensions of Successful Educational Reform**

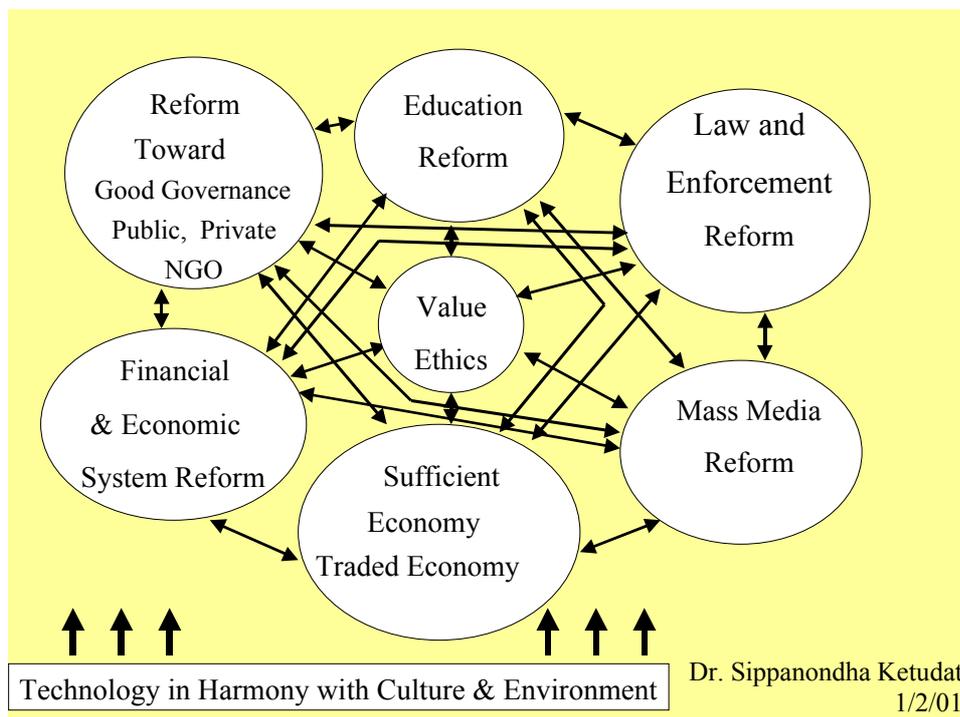


The third tetrahedron (Figure 5) reflects the holism approach to educational and learning reform. It is important to avoid piecemeal reform which often lead to adverse unanticipated consequences. As a concrete example, if the learning system is reformed, but the examination system remains unchanged, serious problems can emerge. Also, both Dr. Prawase and Dr. Sippanondha emphasize the need for integrated reforms in many arenas, not just education, and how they are also complexly related (see Figure 6, from Sippanondha 2001). The Pilot Project emphasized the whole school reform as means to the broadest possible inclusive participation in reform activities. The "whole teacher" refers to a teacher capable of using a wide variety of teaching methods to encourage active, student-centered learning. The whole teacher is capable of using distributed learning advocated by Dr. Pillay. The "whole student" concept is explained below by the fourth tetrahedron.

**Figure 5: A Holistic Approach to Educational and Learning Reform**



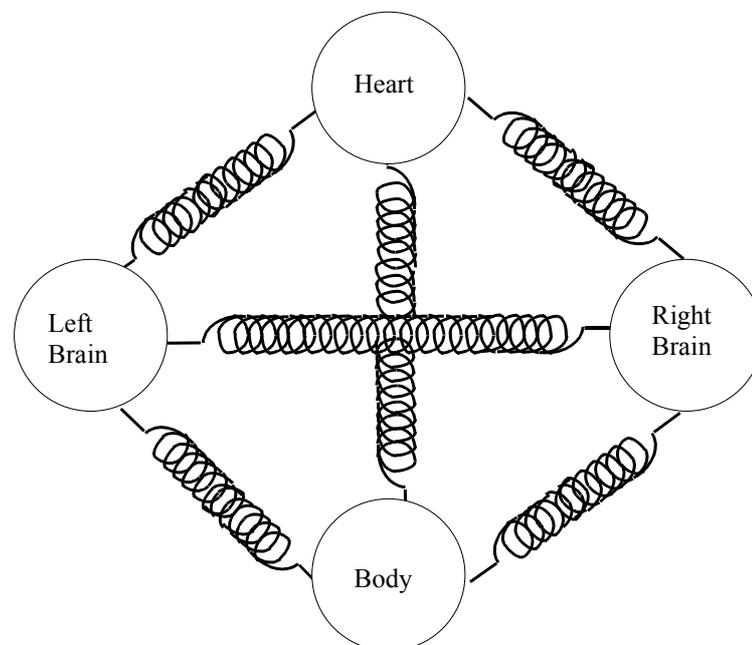
**Figure 6: Integrated Seven Reforms**



The fourth tetrahedron (Figure 7) reflects the diverse learning activities and multiple intelligences (see Gardner 1999a,b, 1993) actively promoted in the National Pilot Project. At the top of the figure is "heart" representing ethics, morality, character, and emotional intelligence, for example. "Heart" also relates directly to social capital in the sense of it being integral to a caring society with a strong sense of and support for philanthropy (see Putnam 2000). Brain research has demonstrated major differences

in the workings of the left and right brains. The former involves higher order, cognitive, and analytical thinking. The latter relates primarily to mental processes associated with creativity, art, music, and aesthetics. The human brain is an extraordinary phenomenon with incredible but often underutilized potential (Sumon 2001: 199; Rung 2000:6). It might be useful to think of the brain as a physical structure and *jit* (mind) as the critical software of the brain. Thus, the ideal human brain needs four kinds of software, to develop fully the capacity of each of the four element of the tetrahedron in Figure 7. At the bottom of the figure is body, reflecting the need for a life-long commitment to exercise and physical activity (see Sathit 2002). All students need to be strong in all four of these interrelated dimensions to be a full *whole human being*. This fourth tetrahedron also reflects the ideals expressed in the volume produced by the Sub-Committees on Learning Reform chaired by Dr. Prawase Wasi (ONEC 2000).

**Figure 7: Pedagogy of the Whole Person: Software of the Mind**



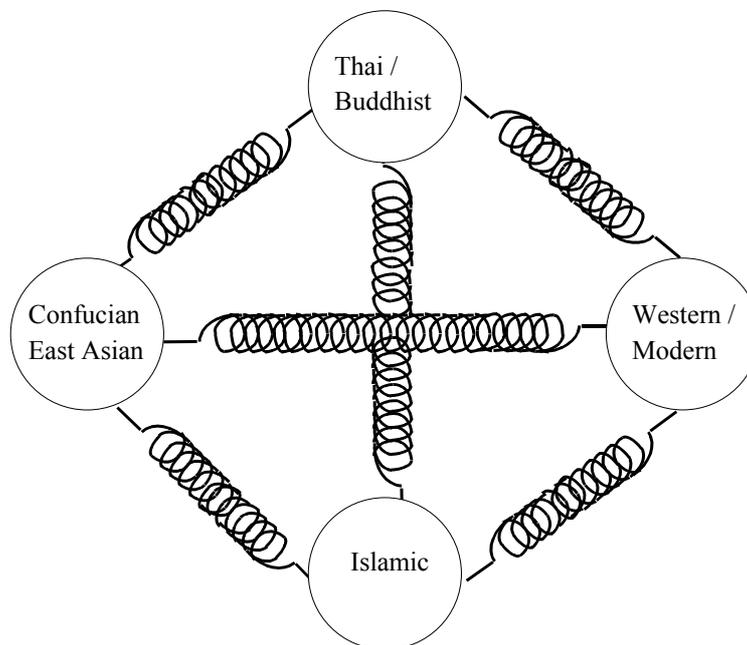
Rie Atagi in her consulting report emphasizes the importance of looking at culture and education (pp. 61-62) and the cultural aspects of learning reform and decentralization. In their recent edited book, *Culture Matters*, Harrison and Huntington' contributors stress the importance of culture as a key factor which shapes human progress in various countries (2000). Atagi points out that basic Thai culture has elements conducive to learning reform and decentralization, and other cultural traits which represent obstacles to educational reform (p. 62.). Among the former are a Buddhist value system stressing being "humble and polite" and being "a happy learner."

Also Buddhist epistemology as reflected in the Kamala Sutra cited at the beginning of this report is highly consistent with critical thinking and active experiential learning, key elements in learning reform. Among the values which may obstruct reform are

the emphasis on hierarchical practices and relationships and an overemphasis on *degreeism* for the sake of status enhancement rather than genuine learning (see Fry 1991). The effective implementation of decentralization will require major attitude and value changes, i.e., that is a fundamental change in mindset and the software of the brain. The fifth tetrahedron (Figure 8) shows four of the major cultural influences on Thai society: 1) Thai/Buddhist, 2) Confucian/Chinese, 3) Western/Modern, and 4) Islamic (primarily southern most region of Thailand). The second value system is important in Thailand because of the significant number of Thais of Chinese ancestry, particularly in urban areas. The Confucian value system as it relates to education has been aptly summarized by the Harvard scholar, Tu Wei-Ming (2000: 263):

**Education ought to be the civil religion of society. The primary purpose of education is character building. Intent on the cultivation of the full person, school should emphasize ethical as well as cognitive intelligence. Schools should teach the art of accumulating "social capital" through communication. In addition to the acquisition of knowledge and skills, schooling must be congenial to the development of cultural competence and the appreciation of spiritual values.**

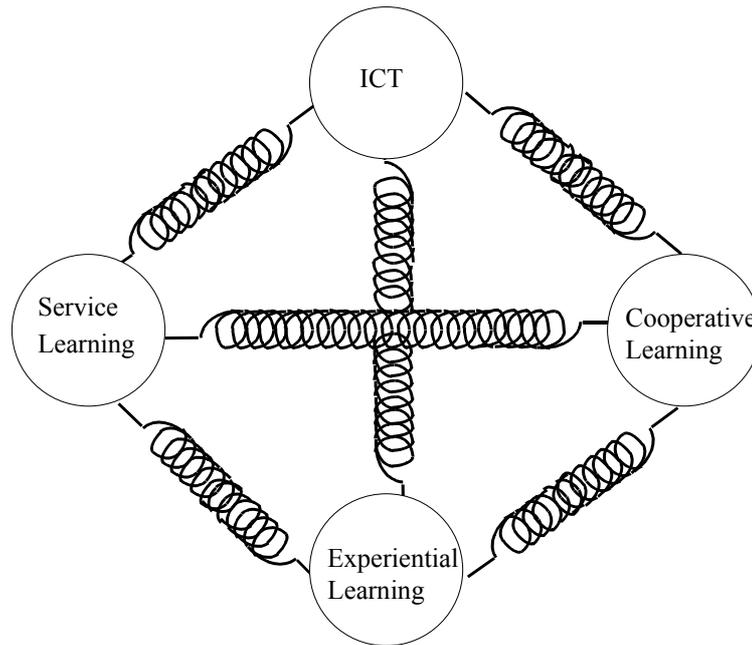
Figure 8: Important Cultural Influences



The sixth tetrahedron (Figure 9) relates to productivity in the field of education. Because of the emphasis on traditional lecture "chalk and talk" type teaching, educational productivity has stagnated compared to many other fields, thus, contributing to a dramatic escalation of educational costs in many countries. Pilot Project 250 demonstrates the potential of autonomous, experiential, and cooperative student learning. A number of the projects developed by the pilot schools also had a

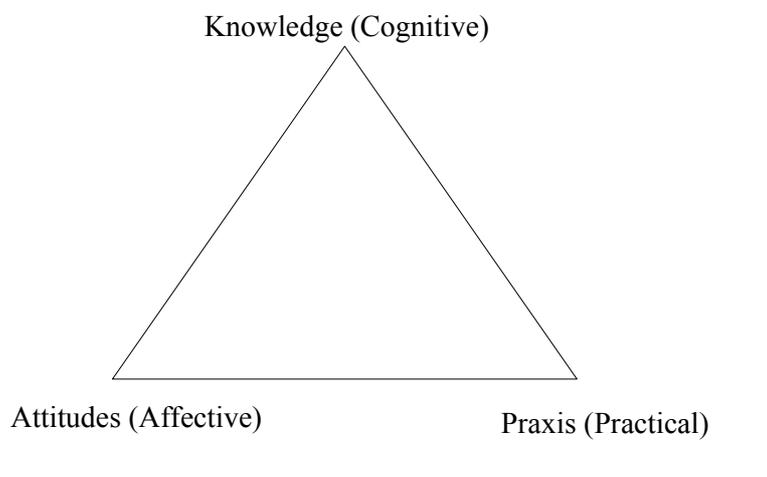
service learning dimension, as students, for example, worked to improve environmental conditions in their local communities. ICT also presents tremendous opportunity and potential for autonomous student learning. The creative combined use of experiential, cooperative, and service learning with a strong ICT component offers excellent potential for improving educational productivity by enabling greater numbers of students to learn independently on their own.

**Figure 9: Enhancing the Productivity of Education Through Autonomous Learning**



One additional figure is introduced, a triangle (see Figure 10), to summarize the new approach to learning represented in the new November, 2001 curriculum. This is a KAP model including three key components: 1) knowledge/wisdom--the cognitive domain, 2) attitudes, world view, morality, confidence-- the affective domain, and 3) praxis-- the practical domain, being able to perform and do. The new learner-centered model of education and the KAP are potentially mutually supportive.

**Figure 10: KAP Model**



**EDUCATION SECTOR AND SUB-SECTOR PERFORMANCE**

Table 9 below provides a succinct summary of education sector and sub-sector performance in light of the ADB framework and recommendations related to this TA.

**Table 9: Education Sector and Sub-Sector Performance**

<b>ADB Technical Assistance Framework</b>	<b>Progress and Accomplishments to Date</b>
<b>Goal:</b> Improve the quality of and access to education	Grade 9-12 enrollment has increased to 69.8%; transition rate to upper secondary has improved to 82.0% (2001)
<b>Purpose:</b> Implement education sector reform to raise secondary school quality and increase access	<ul style="list-style-type: none"> <li>• 250 pilot schools trained in support for quality improvements through learning reform and school-based management; completed May, 2002;</li> <li>• Over 2,000 pilot schools in process of training for implementation of new curriculum, approved November, 2001, in response to NEA; to be completed by September 2, 2002.</li> <li>• Office of Education Standards and Evaluation (OESE) established October 27, 2000, as a public organization.</li> </ul>
<b>Outputs:</b> <ul style="list-style-type: none"> <li>• Formulate school improvement model</li> </ul>	<ul style="list-style-type: none"> <li>• School reform prototype model tested in 250 schools by May, 2002</li> <li>• On May 29, 2002, the Deputy</li> </ul>

<b>ADB Technical Assistance Framework</b>	<b>Progress and Accomplishments to Date</b>
<ul style="list-style-type: none"> <li>Pilot educational improvement workshops</li> </ul>	<ul style="list-style-type: none"> <li>Minister of Education indicated her satisfaction with the pilot project and that it would be extended to all schools over a 10 year period.</li> </ul> <p>Seven workshops held nationwide during 2001-2002</p>
<p><b>Design Summary:</b></p>	
<ul style="list-style-type: none"> <li>Participant seminars on school access and use of information technology (IT) in schools <ul style="list-style-type: none"> <li>OESE reworking of school assessment strategy</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Several special seminars on ICT for Education conducted by Dr. Stamper. Report on ICT for Ed Reform completed by Dr. John Stamper, May, 2002 <ul style="list-style-type: none"> <li>Now ONESQA. ONESQA has developed both a plan and procedures for carrying out its assessments (see ONESQA 2002); in 2002, 4000 schools, P1-12 will be assessed and 150 tertiary institutions; Three major documents have been produced in May and June detailing plans and processes for assessment.</li> </ul> </li> </ul>
<p><b>Activities:</b></p>	
<ul style="list-style-type: none"> <li>Classroom instruction model development</li> </ul>	<p>Prototype model developed, introduced, and tested during seven TA workshops; consulting report of Prof. Sumon Amornvivat contains elaborate details of the model.</p>
<ul style="list-style-type: none"> <li>School-based management model development</li> </ul>	<p>Prototype model developed, introduced, and tested during seven TA workshops; consulting reports of Dr. Boonmee and Dr. Laeka contain elaborate details on the model</p>
<ul style="list-style-type: none"> <li>School-based assessment system development</li> </ul>	<p>Pilot model developed and tested during seven TA workshops</p>
<ul style="list-style-type: none"> <li>Consultants' recommendations</li> </ul>	<p>Seven consultant reports + one integrative synthesis report completed by June 15, 2002.</p>

### **Analysis of the Progress of Education Sector Reforms**

Chapter Four, "Progress of Education Reform," in Rie Atagi's consulting report summarizes the progress of educational reform to date. To both synthesize and update her work, Table 10 has been compiled to show the progress of education sector reforms.

**Table 10: Progress of Thai Educational Reform, 1996-present**

Activity	Current Status/Situation
New Constitution calling for both educational reform and decentralization (Sections 43 and 81)	Approved October 11, 1997
National Education Act (NEA), mandated by the Constitution, to provide the broad guidelines for educational reform	Became law on August 14, 1999
Establishment of the Office of Education Reform (OER)	November 18, 1999; authorized for three years to facilitate the implementation of educational reform
Completion of new legislation drafted by OER to facilitate the implementation of educational reform	23 laws drafted and presented by OER to the government by April, 2001; many related to the restructuring of the MOE. The MOE has prepared 23 alternative bills. Considerable policy gridlock exists in this arena and there have been three different Ministers of Education within a single year. The exact nature of restructuring has been a highly contentious issue.
Building awareness of the need for educational reform	Continual activities during the period, 1999-2002. Conduct of public hearings; Extensive publication program of ONEC related to education reform. Publication of magazine, <i>Saan Pathiruup</i> promoting reform, starting in 1997, with funding support by the Sodsri Saridwongsa Foundation; extensive multi-media attention to educational reform. AU survey indicated that more than 90 percent of Thais indicated that educational change was necessary and almost 90 percent followed news about the changes.
Completion of tasks targeted by the NEA for implementation in 1999-2000.	Evaluation by team of Chulalongkorn University researchers indicated that 76 % of such tasks had been completed; However, in the areas of resource investment and technology for education, only 33 and 38 % of tasks respectively had been completed.
Learning reform mandated by the NEA	<ul style="list-style-type: none"> <li>• The master teacher project was launched and implemented; 326 teachers have earned the title of Master Teacher; 56 Thai Local Wisdom Teachers have been selected.</li> <li>• A 250 school pilot project, supported with financing from the ADB tested a</li> </ul>

	<p>prototype model for learning reform and school-based management; completed in May 2002.</p> <ul style="list-style-type: none"> <li>• New curriculum approved by the MOE on November 2, 2001, to be responsive to NEA; pilot project of over 2,000 schools organized by the DCID, MOE; Six major training seminars organized for teacher around the country. Last seminar to be completed September 2, 2002.</li> <li>• At a meeting on May 29, 2002, the Ministry of Education decided to expand the ONEC pilot project to cover all schools over a ten year period. The new project should build on the lessons and models developed both in the DCID and ONEC pilot projects (see <i>Matichon</i> (5/31/02: 20).</li> <li>• Crown Princess' project emphasizing serving the most disadvantaged populations and emphasizing the scientific method across the curriculum.</li> </ul>
Model for Local Education Areas (LEAs)	<p>MOE pilot project in five provinces, testing alternative approaches to defining LEAs. Near completion. Initial findings seem extremely consistent with recommendations of earlier TA 2996-THA and OER, particularly in terms of the appropriate size of LEAs and administrative efficiencies to be realized through the new system. However, in this pilot there was no significant testing of budget block grant type decentralization.</p>
Teacher Development	<ul style="list-style-type: none"> <li>• Creation of the Teacher Education Reform Office (1996) which produced many studies and proposals for strengthening the teaching profession.</li> <li>• Approval by the Cabinet on May 29, 2002 of a bill for licensing teachers which would transform the current Teachers' Council into the Teaching Profession Council. Licenses would be valid for five years.</li> <li>• Establishment on May 4, 2002, of the Association for the Development of the Teaching Profession; Association already has more than 40,000 members</li> </ul>
National standards and quality assurance	<ul style="list-style-type: none"> <li>• Establishment of the Office of</li> </ul>

	<p>Education Standards and Evaluation (OESE) (Public Organization) on October 27, 2000; Now named the Office of National Educational Standards and Quality Assurance (ONESQA); have plan to assess 4,000 schools and 150 colleges/universities in first round. All schools and colleges/universities to be assessed by 2006. Have organized training in authentic and amicable evaluation (see ONESQA 2001: 31).</p>
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**IDENTIFICATION AND ANALYSIS OF MAJOR ISSUES, CHALLENGES, AND PERSISTING OBSTACLES RELATED TO REFORM:**

To enhance its quality of life and standard of living a nation must improve the productivity of its people. The primary means for doing this are education and human resource development broadly defined. During the period, 1960-1990, the productivity of the Japanese people increased dramatically, primarily as the result of having a quality K-12 basic educational system that ensured that nearly all Japanese had a good solid educational foundation, giving them solid potential for trainability. Indicated below are the major issues and challenges currently facing education and human resource development in Thailand:

- **Lack of unity and coordination of diverse and fragmented Education/HRD efforts**

Human resource development and education in Thailand remain fragmented with a multitude of institutions and organizations involved, with little overall coordination. Rie Atagi (2002: 42), for example, identifies 11 different pilot projects currently being conducted related to learning reform, ICT in education, and the decentralization of educational administration and management. Her list is not exhaustive, as there are also other important pilot projects going on such as a special project of the H.R.H. Princess Maha Chakri Sirindhorn to serve disadvantaged hill peoples, and a project to experiment with community colleges, receiving support from the U.S. government. There is, however, no single agency coordinating these many pilot projects, nor trying to synthesize the results of the various pilot projects. Another pertinent example is that of Dr. Chira Hongladarom, Director of the Institute of Human Resource Development at Thammasat University, and a leading Thai expert on human resources. In a recent article about human resources, Dr. Chira described some of the key elements in his strategies for improving human resource development in Thailand (Jintana 2002: 3). His thinking and approach mirror closely those being emphasized in Thailand's educational reform initiatives. However, the article mentions nothing about these related activities by the MOE and ONEC.

- **Extent of commitment to genuine decentralization, particularly in the areas of budget and personnel**

Thus far, much of the education reform efforts have focused on learning reform and related curricular decentralization. With respect to this domain, a strong and growing consensus has emerged with important changes in organizational cultures. Experimentation with Local Education Areas thus far has focused on structural issues and administrative coordination, rather than on any significant budget or personnel decentralization.

- **Neglect of science and related R & D development**

Rie Atagi (2002: 24) in her report documents that Thai students are receiving much less instruction time in science and mathematics compared to students in many other countries. The various national level indicators (assessing Thailand's international competitiveness in various domains) shown in Table 2 reflect a neglect of innovative science and technology. The emphasis on creativity and problem-solving in the National Pilot Study is certainly a step in the right direction.

- **Persisting equity and access issues**

The major progress in this area is the requirement of the Constitution and the NEA to make nine years of education compulsory and to guarantee 12 years of free education to all Thais. Though a prominent element in both the NEA and the educational reform documents, in actual practice the important policy area of equity and access has received relatively little attention with the exception of the special project of H.R.H. Princess Maha Chakri Sirindhorn to serve the most disadvantaged and the high tech Hua Hin project to serve schools lacking teachers. With the near achievement of universal primary education, the access and equity issue is now most pertinent at the secondary level where considerable regional disparities continue to exist (ONEC 2001: 52). The northeast of Thailand, the most disadvantaged and the region with the largest population tends to lag significantly behind on all major socioeconomic indicators (see ONEC 2001: 4; MOE 1999: Appendix, 9-21; Alpha Research 2001: 216-380). Many schools in the most disadvantaged areas still face teacher shortages (Sumon 2001: 28). The existence of extensive coaching schools in urban areas such as Bangkok for the elite further exacerbates educational regional disparities (Sirikul 2002: 3).

- **Overemphasis on bricks and mortar relative to investing in people (teacher learners; researchers)**

In her report, Atagi (2002: 23) mentions the large amount of funds devoted to new buildings and land (see also Table 3 above). Dr. Silaporn Buasai of the Thailand Research Fund laments that in terms of funding for research "buildings and offices come first" (Onnucha 2002: 2). The key to improving both national productivity and the quality of education is to give high priority to an investment in people, teacher learning, and creative innovative research.

- **Inadequate utilization of ICT for improving human resource development**

Thomas Friedman (1999) in his important work on globalization argues that those countries which do not adequately train their people for the new knowledge economy will be left behind and won't be able to compete effectively in the global economy (see also Thaksin 2001: 8). Dr. Stamper's report identifies numerous areas in which Thailand is underutilizing its IT potential. Friedman notes the visionary leadership of

President Figueres in Costa Rica who implemented a policy to guarantee all Costa Rican secondary students access to the Internet.

- **Inadequate development of international capabilities**

**This was an important theme of Dr. Pillay's report. Many Thais are not adequately interconnected with the global knowledge system, largely because of language limitations. The quality of English language training is mixed and still dominated by traditional approaches (grammar-translation, for example) and there is inadequate diversity in language offerings. Too few Thais have opportunities to study important third languages such as Japanese, Chinese, and Vietnamese. Language and intercultural skills are critically important given the importance of tourism as a service sector in Thailand and the rapid internationalization of the Thai economy (see Table 1).**

## **CONCLUSION AND MAJOR RECOMMENDATIONS: A STRATEGIC FRAMEWORK FOR MAKING REFORM A SUCCESS**

In some ways, despite its many painful and tragic human costs, the Asian economic crisis represented a "wake-up call" to Thailand and it inspired much needed reform initiatives in numerous arenas. Despite a partial economic recovery, Thailand fortunately has not suffered from reform fatigue. In fact there is an impressive degree of reform energy in the education and human resource development arena. However, the clock is quickly ticking. Thailand is already some 10-15 years behind where Korea was in the early 1980s, in the area of science, research, and development (see *Matichon* 6/1/02: 2; Ghani 2002: 51). Korea has launched an ambitious Brain Korea 21 project to create high quality human resources for the 21<sup>st</sup> century knowledge-based society (MEHRD 2002a,b, and c). Their target is to produce 1,300 doctorates per year in the fields of natural sciences and engineering by 2006. While Thailand still has a substantial lead over potential economic competitors such as China, Vietnam, and India in numerous economic areas, such countries are devoting significant priority to enhance their human resource development to try to close the gap and surpass countries such as Thailand.

The National Pilot Project supported by the ADB clearly confirms the important theme of realizing unrealized potential. Given the opportunity, schools from around the country demonstrated impressive creativity in developing more student-centered learning curricula. Students also had many opportunities to demonstrate their ability to be innovative and creative. Another encourage recent example is the Thai high school student who competed with more than a million youth around the world to win the 1<sup>st</sup> prize of an Intel competition in computer software development (*The Nation* 5/21/02: 3A). Given Thailand's long tradition of strength in aesthetics, the country has special potential in the area of computer graphic design and e-commerce.

In addition to the recommendations associated with the issues identified above, the following are key elements integral to Thailand's successfully implementing educational reform and improving the productivity of its people.

## Major Recommendations Related to Teacher Development and Learning Reform

- With respect to the promotion of learning reforms, the National Pilot Study has demonstrated the importance of *holistic approaches*. Whole school, whole teacher, and whole student approaches should be actively promoted and supported. As emphasized by His Majesty King Bhumibol Adulyadej, the promotion of *moral education* as part of the whole student approach is critically important (Sumon 2002a :1). The value of *integrated* across-the-curriculum innovations has also been demonstrated. To implement the new 2001 curriculum, it is important to mobilize wisdom and knowledge *from all sources* (Sumon 2002b: 6). There must also be a holistic approach with respect to policy, planning, and implementation.
- With respect to pedagogy related to learning reform, both Sumon (2002a,b) and Pillay (2000) emphasize the need for a *distributed learning model*, which emphasizes multiple and diverse pedagogical strategies to encourage active, dynamic learning. There is no simple, single formula for effective teaching (Sumon 2002b: 6). The metaphor of a teacher being like the conductor of a symphony with the various instruments representing the diverse repertoire of teaching strategies and approaches may be useful to symbolize the distributed learning model. Teachers must be *empowered* to enable them to develop their own creative teaching models appropriate for their context and situation. To implement this distributed learning model, the educational supervisory system must also be transformed so that supervisors support those already engaged in distributed learning and to encourage and assist others in moving in this new direction.
- It is critically important to align the new standards and quality assurance evaluations with the new curricula and learning approaches being emphasized with major learning reform and curricular changes. With the merger of the MUA and MOE, the critical university entrance examination must also be reviewed to ensure that it is consistent with the learning reforms being implemented. This will require sincere and serious cooperation between the new Ministry and the universities at the policy level. If new models of assessment are not congruent with the new methods of teaching and learning, unanticipated serious adverse effects may emerge.
- In terms of teacher development, given the large number of teachers already in service, this needs to be a priority group. Critical to the success of educational reform is teachers' "solid understanding of the concepts, principles and processes involved in the new approaches of teaching and learning" (Pillay 2002: 49). Innovative models of delivering training must be explored which will involve *hybrids* of school-based training, intensive workshops, and use of ICT (Pillay 2002: 50). The emphasis should be on the development of life-long *teacher learning*.
- The National Pilot Study has demonstrated the value of classroom-based *collaborative action research* to improve learning outcomes. Budgetary support for such research should be a priority (Laeka 2002: 23).
- To facilitate implementation of the new learning reforms and teacher learning, there is also a need to develop Local Learning Resource Centers with diverse

resource learning materials relevant to the new student-centered learning process (Pillay 2002: 52-53; Atagi 2002: 63-67). The Department of Curriculum and Instructional Development, for example, has already developed an extensive and valuable manual related to the teaching of religion and morality under the new 2001 curriculum. With respect to such materials developed by various units of the Ministry, traditionally there has been a tendency for teachers to view such materials as blueprints and mandates which must be mechanically followed. Under the new decentralized curricular system, it is important to stress that teachers must have independence to use their own creativity in developing curricula most responsive and relevant to local conditions and needs.

- With respect to teacher development, it is critically important to strengthen both Faculties of Education in universities and at the Rajabhat Institutes. Their teaching and curricula need to be more closely aligned with both Thai local educational realities and international best practices (Pillay 2002). It is critically important to have teacher education students become involved with local communities and schools. They must seek to achieve an important balance among international, national, and local approaches. Incentives must be developed to *mobilize* local academic resources in support of educational reform. The National Pilot Project has clearly demonstrated the potential of such local institutions, if provided the opportunity to engage with local schools and communities..
- It is extremely important to change the system for evaluating administrators and teachers to provide more systematic rewards for those who are successful in improving student outcomes. The need to establish new *incentive systems* is emphasized by Laeka (2002), Pillay (2002), and Atagi (2000: 68-69). It is important that these new incentive systems be *performance-based*. The evaluation system needs fundamental reform to shift away from an emphasis on power and control. Instead the emphasis should be on self-evaluation and the role of local communities in ensuring accountability for their schools (Sumon 2002b: 6). The evaluation system should be characterized by *kalayanamitr* (an amicable approach emphasizing the three Cs: consultation and collaboration for creativity).
- Related to incentives, it is important to provide *rewards to effective reformers* such as master teachers, national teachers, master teachers, lead teachers, Thai local wisdom teachers, and master administrators. These dedicated and committed individuals need reinforcement and empowerment. The research reports on the National Pilot Project of both Dr. Sumon and Dr. Laeka emphasize the critically important role of such *local change agents* in promoting educational reform and innovation This network needs to be significantly expanded to reduce the excessive burden on many current teachers with such stature (Sumon 2002c: 42).
- Related to teacher utilization, each LEA should develop an EMIS which provides a clear profile of teacher distributions across the LEA. Every effort should be made to minimize the number of schools with inadequate teachers to cover every class. From the previous TA2996, this was shown clearly to have adverse effects on the quality of learning outcomes. In cases in which it remains impossible to provide a teacher for every classroom, the innovative activity-based learning tested in the National Pilot Project should be utilized as a strategy for improving learning in such difficult situations. As part of the LEA's EMIS, there should also be an emphasis on examining the extent to which *learning outcomes are*

*equalized*, a key and valuable indicator used in Dr. Nonglak's report and evaluation.

- Related to teacher development, a new program of *volunteer teachers* should be introduced to assist the most disadvantaged LEAs which have the most serious shortages of teachers. This may be a way of attracting some bright students in the sciences, mathematics, and English language to the teaching profession. Students successfully completing assignments should be provided fellowships to pursue a Master's in teacher education. As demonstrated by the 44 R & D teams in the National Pilot Project, this is also a way to enhance consciousness about the educational problems of remote rural areas. This strategy also deals with the problem of unemployed university graduates, which is still a lingering, though now less severe, aspect of the 1997 Asian economic crisis.
- Also related to teacher development, the Thai government, first on a pilot basis, should experiment with the concept introduced by TERO and Dr. Montri Chulavatnatol of issuing training coupons or vouchers as a way to foster continued teacher learning. Perhaps the new Association for the Development of the Teaching Profession or the newly reorganized Teachers' Council could monitor this process. This approach represents a highly innovative and individualized approach to continued teacher learning, crucial to the success of education reform.
- In terms of ICT, the Thai government must leap frog (quantum leap) but focusing on only *appropriate high technology*. ICT must be a tool, not an end. Thailand's excellent strength in satellite technology infrastructure gives the country special opportunities and advantages to play an important lead role in the proposed Asian Education Network. Thus, through appropriate ICT utilization, Thailand has considerable potential to reduce its own significant digital and information divide and to prepare its students, teachers, and administrators to have solid ICT capabilities to facilitate their becoming *autonomous, life-long learners*.

#### Major Recommendations Related to Management, Leadership, and Structural Issues

- Visionary leadership with strong political will is critical. Improved *management for change* is important at all levels. Funds going to education must be more efficiently used. The newly restructured Ministry of Education, Religion, and Culture must become a visionary "leader which thinks big" while leaving the basic management of education to the new Local Education Areas. Prior to a major educational reform in New Zealand, 70 percent of the education budget went for bureaucratic expenses, while 30 percent was spent on classroom learning. Now 16 years after the reform, only 33 percent of the budget goes for bureaucracy and 67 percent goes directly to classroom teaching. By 1995 New Zealand 12<sup>th</sup> graders were scoring 22 points above the international average in the Third International Mathematics and Science Examination (Ladner and McTigue 2001).
- It is important to announce formally the decision to have 295 Local Education Areas, based on the joint research of the MOE, ONEC, and ONPEC. This recommendation is based on pilot local field research confirming the cost-effectiveness and efficiency of this mode of decentralization. It is also consistent with the earlier recommendations of TA 2996 THA supported by the ADB.
- Also related to leadership, the National Pilot Study clearly demonstrated that *distributed leadership* is a highly effective model that needs to be promoted at all

levels since it leads to empowerment and maximal participation. This approach should be emphasized in administrative and leadership training, based upon the solid empirical support from the National Pilot Study. Also educational management training must be aligned with the promotion of the new student-centered learning approaches and the role of educational leadership in promoting curricular innovation and support for reform-minded teachers. Given the importance of school leadership as a key factor in the National Pilot Study, *leadership training* is critically important (Atagi 2002: 62). As Pillay (2002: 47) emphasizes, it is critically important “to inform all stakeholders why a new management model is necessary and how it will improve the learning outcomes of students.” A recent study of 39 nations supports Pillay’s important recommendation. This study systematically examined (using international data from the Third International Mathematics and Science Study (TIMSS)) the impact of decentralized educational administrative systems on classroom learning. The authors conclude that such administrative changes “influence what actually happens in the daily experiences of teachers and students in classrooms” (Astiz, et al. 2002: 87).

- It is critically important to both sustain and expand networks of targeted schools, academic associations, and other groups in support of educational reform. Such a movement can play an important role in building local level community support for education and learning reform (Laeka 2002: 23-24). Many schools in the Pilot Project have attempted to create and expand networks, but thus far there has been inadequate administrative and community support for such efforts (Sumon 2002c: 42).
- Related to this important leadership theme, the government needs to establish a small but high quality interdisciplinary think tank on national human resource development strategies that transcends individual ministries and reports directly to the Prime Minister, while thinking only strategically in terms of the *national interest*. Involved in this think tank should be quality strategic futurist thinkers from, for example, the Ministry of Education; the Ministry of Science and Technology; NESDB; the universities; several key private sector individuals; key NGOs with an interest in HRD; and TDRI. Thailand clearly has the talent to staff such a think tank. Since people are a country's most important resource, having such a supra-agency could play a valuable policy role in assisting the government to invest wisely and effectively in human resource development. Such a think tank might be called the Thailand Human Resources Development Institute (THRDI). This organization should be *independent, free from partisan political influence*. This strategic unit should be a research think tank to influence educational and human resource development strategies. It should also serve as a clearing house to integrate and synthesize research related to educational development.
- Coalition building is also crucial to the success of educational reform. Though considerable progress has been made in this arena, particularly in developing public support and understanding of the need for educational reform, *further bureaucratic coalition building* is still imperative. This has certainly been hindered by the maze of organizations and stakeholders involved in educational reform and by some major differences in thinking about new administrative structures.

- As the National Pilot Study is extended nation-wide, it is extremely important that the *targeting element* in the pilot project be significantly expanded by emphasizing block grants (as part of budget decentralization) that put "the last first" to try to reduce regional educational disparities and to ensure that the equity principles guaranteed in the 1997 Constitution and 1999 NEA are met. To pursue such a policy is not only right and just, but is also good politics, since the most disadvantaged Northeast has the largest population. Such targeting will also importantly built further sustainable rice-roots support for educational reform. Such a strategy will also help to identify talent in the populous Northeast. For Thailand's future it is important that *all* its talent be realized.
- Continuity in leadership is important at all levels. Frequent changes in administrators are highly disruptive of the reform process. Having the top civil service leadership in the Ministry of Education change nearly every year is not conducive to producing visionary leadership for change.
- As emphasized by Professor Sumon Amornvivat and Dr. Laeka Piya-Ajariya, it is critically important to have *unity* among the diverse agencies and organizations responsible for education and human resource development. Continued fragmentation in the administrative area will adversely affect chances for successful educational reform (Sumon 2002c: 41-42).
- Finally and perhaps most importantly, it is imperative that bureaucratic vested interests not be allowed to block critically important structural changes mandated by the 1997 Constitution and the 1999 NEA essential for Thailand to improve the productivity of its educational sector and strengthen its international competitiveness

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## Addenda:

### Addendum I

#### List of Some Exemplary and Useful Web-sites

[http://www.onec.go.th/english\\_ver/english\\_ver.htm](http://www.onec.go.th/english_ver/english_ver.htm) This is the official English language version of the Web-site of the Office of the National Education Commission. It provides extensive information on Thai education and Thai educational reform.

<http://www.moe.go.th/moe.html> This is the official English language version of the Web-site of the Ministry of Education with extensive information on Thai education and the Ministry's activities and initiatives related to educational reform.

<http://www.kanchanapisek.or.th> This is the Web-site with information on the various innovative projects of H.R.H. Princess Maha Chakri Sirindhorn.

<http://www-personal.umich.edu/~nisbett/interest98.html> This Web-site has information on research related to hypothesized differences in the ways Asians and Westerners think, based on the research of Professor Richard Nisbett at the University of Michigan.

<http://www.letus.org/dls/> This Web-site has information about current research on Distributed Leadership by scholars at Northwestern University supported by the National Science Foundation and the Spencer Foundation.

<http://www02.imd.ch/wcy/ranking/> This Web-site contains the rankings of *The World Competitiveness Yearbook*, compiled by the International Institute for Management Development, Lausanne, Switzerland.

<http://www.timss.bc.edu/> This Web-site contains the results of IEA data on comparative achievement for a wide variety of countries.

<http://www.clcrc.com/> This is the Web-site of The Cooperative Learning Center, University of Minnesota. Its focus is on research concerning cooperative learning and its impact on schools and children.

<http://www.thrall.org/proteus.html> Proteus Internet Search. A meta search engine which draws on a wide range of widely used search engines. An excellent tool for autonomous Internet learning by students, teachers, and administrators.

<http://www.iste.org/> This is the Web-site for International Society for Technology in Education with information on ICT and its use to improve learning and teaching.

<http://www.tc.columbia.edu/~teachcomm/what.htm> This is the Web-site of the National Commission on Teaching & America's Future, Teachers' College, Columbia

## **Addendum II**

### **Enhancing the Equity, Quality, and Efficiency of Upper Secondary Education in Thailand: A Proposed Project to Strengthen Education in Thailand's Most Disadvantaged Areas**

#### **Background**

##### First Education Project Supported by the Asian Development Bank, 1998-1999 (TA 2996 THA)

In response to the Asian economic crisis of 1997, the Asian Development Bank provided Thailand with both a major social sector loan (\$500m) and a related technical assistance grant (\$700,000) focusing on a policy study of educational management and finance, approved March 12, 1998. Both international and local consultants were engaged to conduct the study. The project resulted in four major volumes on educational finance, the educational management system, the teaching personnel system, and an assessment of a special student loan program, which related directly to the economic crisis (Fry 1999a,b; Cresswell, 1999; Ziderman 1999). These studies were strongly supportive of the critical need for decentralization, enhanced educational choice, and major reforms in learning and teacher development. The policy studies made possible by this first ADB project were extremely supportive of the ideas which subsequently became the core of the August, 1999 National Education Act (NEA). Also in August, 1999, a major national conference was held to disseminate the results of the project.

##### Second Education Project Supported by the Asian Development Project, 2001-2002 (TA 3585-THA)

As a follow-up to the first project, a second project was begun in 2001 to implement a piloting of 1) refinement of strategies to promote student-centered learning, 2) continuous assessment, and 3) school-based management. Fry (2002) has provided an integrative synthesis of this project, which describes its overall success in implementing both learning and organizational/administrative reforms in 250 diverse schools around the country. The project clearly demonstrated the feasibility of academic decentralization and school-based management. A major dissemination conference was held June 11-12, 2002 in Bangkok. Over 250 educators from all key agencies and all 76 provinces were present. Educators from various regions reported on the types of innovative curricular initiatives they had undertaken. There was general enthusiasm for both the student-centered learning reforms and school-based management. Some major themes from these local initiatives generated by the bottom-up approach used were diversity, empowerment, cultural preservation, environmental preservation, and local knowledge and wisdom. The pilot project also clearly demonstrated the importance of both distributive leadership (broad genuine sharing of power by school administrators) and strong school-community relations.

The project also confirmed the value of new type of amicable "supervision" and evaluation which was extremely supportive of participating schools and their staff and students. Finally and perhaps, most important in terms of the proposed follow-up project, the pilot project demonstrated the potential effectiveness of targeted block grants.

### Current Educational Context

Though Thailand has achieved impressive success in implementing near universal primary education, high literacy rates for both men and women, and a large and expanded system of tertiary education, a major weakness facing the Thai educational system is the uneven quality of secondary education and unequal access to quality upper secondary education. This means that the quality education for all policy stipulated in the 1997 Constitution (Section 43) and the 1999 National Education Act are not being satisfied. When Thailand is evaluated externally, the percentage of relevant age group in upper secondary education weakens Thailand's international competitiveness. For example, in 2000, 1,282,367 Thai youth of ages 15-17 were not enrolled in school (ONEC 2001a: 13). This also relates to the low average educational level of the Thai work force, 7.2 years (ONEC 2001b: 105). Without adequate human capital, these are particularly vulnerable groups. With respect to expanding upper secondary level enrollments, Vietnam is making impressive gains, for example.

Data from the Ministry of Education's last round of national testing (MOE 1999: 39-42) confirm dramatic regional disparities in test scores for the various academic subjects taught at the upper secondary level. As a concrete example, five times more students in District 1 (central provinces near Bangkok) are scoring well on the mathematics examination than those students in District 9 (upper Northeast). The Northeastern districts of 9, 10, and 11 lag consistently behind in all major subject areas. Interestingly the same provinces lagging behind educationally are those identified by the National and Economic Social Development Board as having the greatest numbers of villages with serious poverty. Provincial level data compiled by Alpha Research (2001: 215-380) confirm such regional disparities. Also recent research by Professor Pranee Tinagorn of the Department of Economics at Thammasat University documents dramatic increases in income inequality in Thailand during the past four decades, despite rapid macro economic growth. A recent conference on coaching schools sponsored by ONEC also indicated tremendous advantages enjoyed by urban youth with access to such special resources. Three billion baht are spent each year on such schools.

H.R.H. Princess Maha Chakri Sirindhorn is highly aware of such conditions and has instituted a number of programs to serve disadvantaged rural youth. She also has an important forthcoming book documenting Thailand's most disadvantaged groups.

Prime Minister Thaksin Shinwatra has also indicated a firm commitment to a war on poverty. However, in the past much anti-poverty funding has gone into construction. Improvements in human capital are a strategy to *sustain* movement away from poverty. There is an ancient Chinese proverb which states that it is much better to

teach an individual to fish than to give them fish. This proverb relates directly to the efficiency theme emphasized below.

### Themes of the Project and Key Target Groups

The three major themes of the proposed project are **equity, quality, and efficiency**, directly responsive to the mandates of the 1997 Constitution and 1999 NEA. The matrix below relates these themes to key examples of strategies to be used in the project.

Thailand's Northeast which has the largest numbers of disadvantaged groups is also the country's largest demographic region accounting for more than a third of the nation's population (34.7%). Thus, there are more than a million youth aged 15-17 in this populous region. Including other regions such as the north and south, which also have pockets of disadvantaged areas, the total target population of youth served by the proposed project could be on the order of almost two million. The project should focus on those areas where continuation rates to upper secondary are the lowest. Since 36.2 percent of upper secondary students are in the vocational stream, this project must also address the important issue of vocational education as well.

### Project Objectives

Thus, a primary focus of the proposed project would be to improve the equity, quality, and efficiency of upper secondary education in Thailand's most disadvantaged areas, to meet the goals of the National Education Act of 1999. This would be a multi-faceted project building on the two previous projects

Themes	Examples of Strategies
<b>Equity</b>	<ul style="list-style-type: none"> <li>• Developing empirical indicators and measures to determine the most disadvantaged areas and groups.</li> <li>• Developing mechanisms for effective targeting of resources to these needy areas.</li> <li>• Developing systems to assess and evaluate the impact of such targeting.</li> </ul>
<b>Quality</b>	<ul style="list-style-type: none"> <li>• Developing cost-effective strategies for promoting sustained teacher learning</li> <li>• Developing strategies for the appropriate and cost-effective use of ICT to promote quality of</li> </ul>

	administrators, teachers, and students <ul style="list-style-type: none"> <li>• Implementation of learning reforms</li> </ul>
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Themes	Examples of Strategies
<b>Efficiency</b>	<ul style="list-style-type: none"> <li>• Developing effective EMIS systems for LEAs and schools</li> <li>• Developing strategies for eliminating redundancies and the promotion of the sharing of resources</li> <li>• Promotion of <i>distributive leadership</i> approaches (lesson from Pilot Project 250)</li> <li>• Strategies for dealing with teacher shortages</li> </ul>

supported by the ADB (TA 2996-THA and TA 3585-THA). A major objective is to strengthen the capacity of LEAs in the most disadvantaged areas of Thailand. This would also provide an excellent opportunity to pilot a system of genuine budget and personnel decentralization by targeting block grants to these LEAs. Careful attention must be paid to assure that there is not *recentralization* at the LEA level and that school-based management is the norm.

### Key Project Elements

- Synthesis of existing pilot projects related to educational reform for potential lessons applicable to this new project.
- Development of empirical indicators (collaboration between new MOERC and NESDB to decide on LEAs for potential targeted assistance. The NESDB has already identified 12 key provinces with the largest number of poor villages (Piyantart 2002: 2A). The new book by H.R.H. Princess Maha Chakri Sirindhorn (2002) should also be helpful in identifying disadvantaged groups.
- Develop local R and D teams (building on the experience of the just completed TA) to assist LEAs in raising the quality of schools in their areas through the use of recently tested learning reform models, school-based management, and the new system of amicable evaluation.
- Given the growing importance of science, mathematics, English as foundational subjects, there should be a special focus on strengthening quality in these subjects through the use of new student-centered approaches.

- Development of Local Learning Resource Centers to facilitate life-long *teacher learning* at or close to their teaching site. If too much teacher training occurs away from site, inordinate funds end up being spent on non-educational costs (travel, food, and lodging).
- Assistance in overcoming the digital divide by assisting the schools in strengthening their ICT interconnectivity to gain access to diverse ICT learning resources. The emphasis should be not be on ICT as a goal, but as end with a focus on the use of *appropriate high technology*.
- An opportunity to pilot Dr. Montri's idea of issuing training coupons to facilitate teacher learning in critical areas.
- Use of volunteers (recent BA/BS graduates) to assist in schools with a shortage of teachers. This may be a way of attracting bright young people to the teaching profession. Special incentives should be provided for such graduates. This strategy also helps with the persisting problem of unemployed or underemployed university graduates.
- Develop a system which will provide rewards and incentives to the genuine and committed reformers.

### **Rationale for Funding**

Scholars such as Michael Porter at Harvard give great attention to the key factor of international competitiveness. Other scholars such as Princeton economist Paul Krugman emphasize how critically important it is to raise the productivity of a country's population. Currently Thailand's rankings on many of the key indicators (*World Competitiveness Report 2001*) are quite low. Strengthening human resource development is central for Thailand to become both more competitive and productive. The highly uneven nature of Thai educational quality and human resource development documented above represents a major weakness in the current Thai educational system. Thus, it is imperative to improve the equity, quality, and efficiency of the system in serving the *entire* population. The future of Thailand depends fundamentally on the quality of its human resources. Having a relatively large disadvantaged sector is both inequitable and inefficient (lost or unidentified talent, for example) and does not reflect the civil society called for by the Constitution and the NEA.

Currently, the Thai government is facing balance of payment difficulties as export goals have not been met. A new project from the ADB would provide for a valuable influx of foreign exchange, which would contribute to economic stabilization.

Finally, the Thai government itself should strongly support a project of this nature which is so focused on targeting the most disadvantaged and building local capacity related to the important implementation of decentralization, a major mandate of both the 1997 Constitution and the 1999 NEA.

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