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Policy Research in Asia

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Rie Atagi

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Foreword

With the gradual attainment of universal primary education, governments are shifting their attention to secondary education. Responding to the increasing demand for secondary education presents serious challenges and major opportunities in the quest for Education For All (EFA), and countries are striving to find policy responses to address these emerging issues.

It is clear that teachers play a fundamental role in addressing challenges faced by secondary education. Ensuring the presence of competent secondary teachers in urban and rural areas is a major concern in both quantitative and qualitative terms. Existing studies on teacher-related issues and analyses of teacher policy in developing countries tend to focus on primary education, probably due to the special emphasis given to primary education in the EFA process. In order to fill the gaps and respond to the increasing demand for quality secondary education, the Education Policy and Reform (EPR) unit of the UNESCO Asia and Pacific Regional Bureau for Education (UNESCO Bangkok) coordinated a regional research study on secondary teacher policy and management in 2007 and 2008.

This series includes a regional synthesis paper on comparative assessment of issues and policies affecting secondary teachers in East and South-East Asia, and five case studies: Lao People's Democratic Republic, Malaysia, People's Republic of China, Republic of Korea, and Thailand. Three major areas related to secondary teachers are discussed in the case studies: quantitative analysis of demand and supply of secondary teachers, quality of secondary teachers, and compensation. Each study is presented as a summary of the original study, and gives an overview of the status and issues of the country's secondary education system. Researchers and officials from several universities and education ministries collaborated in the preparation of the study. UNESCO Bangkok would like to sincerely thank all those individuals and institutions who provided their expertise and professional experience to this research.

The findings presented in the series are intended to help governments gain insight into policy for secondary teachers across a diverse range of countries, and draw lessons for possible policy responses to challenges and problems in the expansion of secondary education.

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Director
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List of Abbreviations

BMA	Bangkok Metropolitan Administration
DGE	Department of General Education
ELI	English Language Institute
ESA	Education Service Area
GER	Gross Enrolment Ratio
GPI	Gender Parity Index
IMD	International Institute for Management Development
IPST	Institute for the Promotion of Teaching Science and Technology
IT	Information Technology
MOE	Ministry of Education
MOI	Ministry of Interior
MUA	Ministry of University Affairs
NEA	National Education Act (1999), amended in 2002
NESAC	National Economic and Social Advisory Council
NESDB	National Economic and Social Development Board
NIDTEP	National Institute for Development of Teachers and Educational Personnel
NSO	National Statistics Office
OBEC	Office of the Basic Education Commission
OEC	Office of the Education Council
OECD	Organization for Economic Cooperation and Development
OHEC	Office of the Higher Education Commission
ONEC	Office of the National Education Commission (became OEC in 2003)
ONESQA	Office for National Education Standards and Quality Assessment
ONPEC	Office of the National Primary Education Commission

OPEC	Office of the Private Education Commission
OPS	Office of the Permanent Secretary
OVEC	Office of the Vocational Education Commission
PISA	Programme for International Student Assessment
TEPC	Teacher Civil Service and Educational Personnel Commission
TERO	Teacher Education Reform Office
TCT	Teachers Council of Thailand
TIMSS	Trends in International Mathematics and Science Study
UIS	UNESCO Institute of Statistics
THB	Thai currency, approximately 35 *baht* = US$ 1 at the time the research conducted for this study

Section 1

Brief Overview of Thailand's Development

1.1 Cultural and Demographic Context

Located in the heart of South-East Asia, the Kingdom of Thailand is bordered by Lao PDR, the Republic of the Union of Myanmar, Cambodia and Malaysia. Culture and traditions in Thailand are influenced by its neighbouring countries as well as India and China. Buddhism is closely connected to people's daily lives, beliefs and identity with over 35,000 monasteries and 258,000 monks in the country (National Statistical Office of Thailand, 2009.) Monks are highly respected. Families encourage their sons to study Buddhism as a monk at least once. The official calendar in Thailand is based on the Buddhist Era, which begins 543 years ahead of the western calendar.

Thailand is the fourth most-populous country in South-East Asia with a population of 67.4 million. Although it is increasing, the rate of growth has been on the decline. From 1995 to 2000, Thailand's annual rate of population growth remained below 1 percent. In the early 2000s, the growth rate bounced back slightly and peaked at 1.23 percent in 2003. However, it has once again declined and in 2008 stood at 0.61 percent.

Thailand saw the biggest drop in fertility rates in the 1970s and 1980s. In 1970, the average number of births per woman was 5.43, which was more than double the number of births per woman in 1990 (Hirschman and Young, 2000). Since 2002, Thailand's fertility rate has remained constant at 1.71 (World Bank, 2009*c*). Although the majority of people in Thailand are ethnically Thai, there are significant minority groups including those of Chinese decent, Malay Muslims in the South and various hill tribes, each with their distinct language and culture, in the northern mountainous area of Thailand.

1.2 Economic and Social Context

Thailand experienced rapid economic growth between 1987 and 1996 from its exports and flourishing tourism industry. During the boom period, economic growth was an impressive 9.5 percent. Although its economy suffered from the 1997 Asian financial crisis, it was able to recover and the average growth between 1966 and 2006 was 6.4 percent (Warr, 2007).

Since the 1980s, the Thai government has been successful in reducing poverty and expanding healthcare. By 2006, the number of poor people in Thailand declined to 6.1 million from 18.4 million in 1990 (World Bank, 2009*a*). With better access to healthcare, the mortality rate for children under five has decreased by 77 percent since 1990. The percent of the population undernourished dropped by 12 percent from 1990 to 2005 (World Bank, 2009*b*). However, in spite of these improvements, economic inequalities still persist. Thailand's Gini coefficient, an index of income inequality, is relatively high at 0.42 in 2002. It is estimated that 19 percent of Thailand's income inequality derives from education (World Bank, 2006).

As a newly industrialized country, Thailand's dependence on international trade is clear, with exports valued at 61.9 percent of the GDP in 2007. Thailand is a leading exporter of rice and 38.7 percent of Thailand's workforce is in agriculture (Library of Congress, 2007). However, the contribution of agriculture to the GDP is decreasing, while exports are on the rise. In 2007, manufacturing accounted for 34.9 percent of the GDP, whereas agriculture was only 11.4 percent of the GDP.

Thailand is becoming the centre for automobile manufacturing in South-East Asia. More than 400 billion baht of vehicle parts and accessories were exported in 2007, compared to only 3.3 billion baht in 1990 (ADB, 2009). To continue productivity growth as workers move from less productive jobs to manufacturing, Thailand needs to remain competitive and attract foreign investments, which brings in new technology and training.

Despite its economic growth and continued industrialization, Thailand's economic competitiveness has dropped from 21st in 1998 to 32nd in 2003. The International Institute for Management Development (IMD) ranks Thailand as the 26th most competitive economy in its 2009 *World Competitiveness Yearbook*. In South-East Asia, Thailand's economy is only surpassed by Singapore and Malaysia (IMD, 2009*a*). Thailand's development prospects are threatened by its weak scientific and educational infrastructure. It was ranked 47th for total number of research and development (R&D) personnel employed per capita; 49th for secondary school enrolment; and 53rd for the number of inhabitants per trained doctor or nurse. The National Electronic and Computer Technology Center (NECTEC) reports that Thailand's investment in R&D is merely 0.1 percent of its GDP, while developed countries invest two to three percent. The private sector's investment in R&D is estimated at ten percent of the total, which is low compared to countries such as Singapore. Furthermore, the role of research in Thailand's higher education institutions is weak, given the teaching tradition and few incentives for promotion. Thailand is now challenged to identify competitive niches. Quality education is necessary to develop the human resources needed to improve Thailand's competitiveness in a global market.

Education's role in helping students acquire the necessary skills to meet market requirements will be increasingly important. As Thailand progresses towards an information-based society, the search, selection and application of information and the creation and dissemination of knowledge play critical roles in both individual and organizational development. The knowledge and skills needed for Thailand to succeed is changing. There is demand for reform of the traditional teaching-learning process.

Section 2

Major Policy Trends Related to Secondary Education

Thailand is in the midst of a major education reform. Its primary goal is to improve the quality of education in response to Thailand's development challenges, the social costs of development and the poor academic achievement of Thai youth (Atagi, 2002).

As Thailand has achieved universal primary education and lower secondary education is compulsory, there is an increasing awareness that secondary education is critical to the future of today's youth. Expanding access to secondary education and ensuring the quality and relevance of secondary education represents a major challenge. Often, a rapid expansion of access is pursued at the cost of failing to deliver quality education. Access to secondary education is meaningful only when the quality and relevance of education are assured. Furthermore, secondary education can be a bottleneck to sustainable development if equitable access to quality secondary education remains an issue.

The need to expand access to secondary education and improve its quality is strongly reflected in important policy documents approved as an integral part of the current educational reform in 1997 and 1998. The 1997 Constitution formed the foundation for the current education reforms. With the objective of transforming Thai society into a "learning society", the Constitution included provisions that aim to provide greater access to education through formal, non-formal and informal education channels and stressed equal opportunity and twelve years of free quality education for all. The *Eighth National Economic and Social Development Plan (1997-2001)* emphasized developing "quality and capable Thais who can initiate ideas and be creative" (NESDB, 1997). Enactment of the 1999 National Education Act (NEA) was a major step towards realizing educational reform (ONEC, 1999). As stipulated in the 1997 Constitution, the NEA serves as the master legislation for educational reform.

Based on the NEA, supportive policies for teachers are needed to provide an environment conducive for improving access to quality education. The practice of teachers lecturing to students and enforcing rote learning is most prevalent in secondary education, especially at the upper secondary level in which teaching focuses on preparing students to take the university entrance examination (ONEC, 2000).

2.1 Administration of Secondary Education

Under the current education reforms, a new structure was implemented in line with the 2002 Bureaucratic Reform Bill to streamline policy-making, financing and the management and operation of the education system. At the central level, three key government agencies, the Office of the National Education Commission (ONEC), Ministry of Education (MOE) and Ministry of University Affairs (MUA), were merged into a single ministry. At the new MOE, there are five lead agencies: (a) Office of the Permanent Secretary (OPS); (b) Office of the Education Council (OEC); (c) Office of the Basic Education Commission (OBEC); (d) Office of the Higher Education Commission (OHEC); and (e) Office of the Vocational Education Commission (OVEC). The OPS oversees and coordinates the Ministry. The OEC is responsible for education policy and planning. The OBEC oversees the management of basic education, pre-school, primary and secondary education (except for vocational schools which are administered by OVEC). The OHEC is responsible for all post-secondary education, including universities under the previous MUA and institutions previously under the MOE.

Before the restructuring, primary schools and secondary schools were managed separately by the Office of the National Primary Education Commission (ONPEC) and the Department of General Education (DGE), respectively. However, under the reforms, they were merged as OBEC to achieve "unity for the operation of basic education and the sharing of resources for effectiveness and efficiency" (Sangnapaboworn, 2005, 2007). To support the decentralization of education administration, the OBEC established 175 (increased to 185) Educational Service Areas (ESA) throughout the country. To oversee the ESAs, Area Committees for Education were formed consisting of representatives from the community, private sector, local administrative organizations, teacher associations, educational administrators, parents, religious leaders and scholars. The committees oversee both public and private institutions for basic education and degrees lower than the bachelor's level.

The Ministry of Interior (MOI) also has an important role in actualizing educational decentralization because of its involvement with local administration organizations and their support to education. The NEA demonstrated its support for administrative decentralization in 1999, when it enacted the Plans and Procedures for the Decentralization to Local Administration Organizations. Accordingly, transfer of school jurisdiction from the MOE to the local administrative organizations began. The transition, however, has not been easy partly because of teacher opposition and partly due to a lack of readiness by the local administrative organizations. Some teachers are concerned that the transfer of administration to the local body may lead to political interference in education issues, such as teacher recruitment and job security. Furthermore, some local administrative organizations are financially unable to take on the responsibility of struggling secondary schools. Thus, the decentralization process has slowed.

Related to the major restructuring of the MOE in 2003, the unification of primary and secondary education administration under the OBEC was not welcomed by all secondary school principals. They felt disadvantaged in the new structure since: (a) primary school teachers and secondary school teachers have different organizational cultures; (b) secondary schools are a minority in the ESA and (c) secondary schools receive less funding than primary schools (Sangnapaboworn, 2007).

Besides the OBEC, other departments are also involved in secondary education. Approximately 16 percent of total secondary student enrolment is in private schools which are overseen by the Office of the Private Education Commission (OPEC) under the OPS. At the upper secondary level (Grades 10-12) the system is divided into two tracks, general and vocational. While the general track is under the supervision of the OBEC, the vocational track is supervised by the OVEC. Private schools account for around 13 percent of students at the lower secondary level. Approximately 11 percent of students enrol in private upper secondary school for general programmes and 36 percent for vocational studies (UIS, 2010).

Secondary education is also provided by other ministries such as the Ministry of Tourism and Sports, Ministry of Culture, Ministry of Social Development and Human Security and the Royal Thai Police. While there are many agencies involved in providing secondary education, currently there is no department specifically overseeing it. Although the NEA promotes "unity in policy, diversification in implementation", lack of a focused secondary education unit could lead to policies and actions which do not meet its fundamental needs. The MOE recognizes the specific needs of secondary education and has in turn discussed the establishment of a unit responsible for it. Implementation has not yet occurred.

2.2 Financing Secondary Education

Thailand has committed significant financial resources to education, providing one of the largest shares of total public expenditures to the education sector in the world since 1991. Even after the onset of the 1997 economic crisis, the government provided 25 percent of total public expenditures for education, which was a greater portion than previously, demonstrating the government's commitment to education as a tool for the nation's recovery and development. During the years 1997 to 2007, the Thai government annually spent roughly 4.5 percent of its GDP on education. In each of those years, over 20 percent of the government's national budget was spent on education with approximately 22 percent being spent in 2007 (OEC, 2008). Nonetheless, the budget does not favour secondary education. The largest proportion of the budget, nearly half, is allocated to pre-primary and primary education. In contrast, the budget allocation for secondary education has only increased slightly since the 1999 NEA enactment which mandated compulsory lower-secondary education and free secondary education. In 2006, 27 percent of the education budget was devoted to secondary education (OEC, 2006). Along with the establishment of the OBEC, the budgets for pre-primary, primary and secondary education have been unified since the fiscal year of 2005, making it impossible to discern how funding is divided. In the most recent 2009 government budget, 18 percent of the total budget was allocated to education and of that, 63.4 percent was for basic education (Siam Intelligence Unit, 2009).

Previously, public expenditure per student for secondary education was much less than that for primary and tertiary education. According to the UNESCO Institute of Statistics (UIS), Thailand was one of the very few countries that spent less on secondary education than

primary education (UIS, 2006a).[1] In fact, a World Bank (2005) study on secondary education found that the countries which have had success in expanding secondary education have per-student public expenditures for the secondary level 1.4 times higher than spending per primary student and expenditures per tertiary student at three times the expenditure per secondary student (World Bank, 2005). While the context of each country varies, Thailand's budget allocation for secondary education needs to be reconsidered to increase access and improve quality.

Furthermore, the current approach of allocating public funding to secondary education does not favour the poor. A greater percentage of public spending is allocated for the poorest quintile at the primary education level, but it is equally distributed across the secondary education level (World Bank, 2006).

2.3 Access to Secondary Education

Thailand has made significant progress in developing its national education system and providing access to basic education over the last century. Although Thailand has not yet achieved the goal of universal secondary education, the expansion of access is impressive. The more challenging issue is equity in access. While access to primary education is fairly equal across the Thai population, equity in access to secondary education remains an issue. Although the gap is getting smaller, the poor and rural youth are still seriously disadvantaged.

Expanding Access to Basic Education

Historically, Thailand's basic education focused on providing its citizens with at least four years of education. Following the 1932 revolution which transformed Thailand from an absolute to a constitutional monarchy, four years of primary education became compulsory for those aged 8 to 15. A major structural reform in 1977 changed the educational structure to include six years of primary education and six years of secondary education, three of lower and three of higher. By the 1980s, more than 90 percent of school-aged children were enrolled at the primary level (Tunsiri, 1994). In 2005, the retention rate at the primary school level was 90 percent and the literacy rate was 98 percent (UIS, 2010). By 2006, the primary school enrolment was nearly universal, though some important gaps remain in certain vulnerable groups.

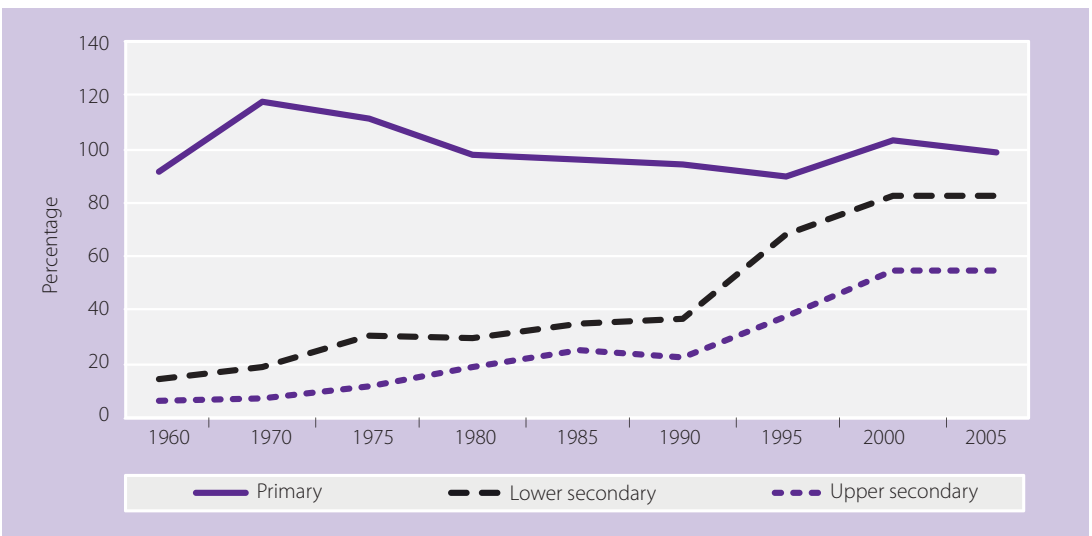
Regarding access to secondary education, there have been gradual improvements over time. In the 1970s and 1980s, the transition ratio increased gradually from 20 percent to 30 percent. However, as most secondary schools were located in urban areas, the distances to school hindered rural children's access to secondary education. Also, parents' financial limitations, lack of motivation and need for extra hands in the fields were obstacles to educational access (Tunsiri, 1994). By the end of the 1980s, the low enrolment rate in secondary education

1. However, the recent data from the OEC (2008) indicate that per head expenditure for lower and upper secondary education is 3,500 baht and 3,800 baht, respectively, which both exceed the per head expenditure for primary education of 1,900 baht.

became a serious concern. The transition rate from primary to the lower secondary level was only around 40 percent (Tunsiri, 1994; Murata, 2007). In 1991, a World Bank study pointed out the inappropriately low enrolment for secondary education considering Thailand's income level (World Bank, 1991).

Secondary education enrolment surged in the 1990s. Starting in 1987, the MOE implemented a pilot project to extend education opportunities at the lower secondary level. These extension schools were lower secondary classes opened at existing primary schools in villages where the rural poor did not have access to existing lower secondary schools. First, only 216 primary schools were chosen, but the project expanded quickly. By 1994, 4,081 classrooms had been opened and by 1997, 6,281. Along with the extension school project, there were an increasing number of primary school graduates aspiring for higher levels of education. As a result, the enrolment at lower secondary schools increased from 37 percent in 1990 to 82 percent in 2000. Although the enrolment at upper secondary schools is lower, it also doubled from around 23 percent to just below 55 percent over the same decade (Murata, 2007*a*) as Figure 1 shows.

Figure 1: Enrolment Ratio by Level of Education: 1960-2005



Note: Regarding primary school enrolment from 1960-1975, the enrolment ratio for the lower four years of primary school is used, and after 1980, six years of primary school is used.

Source: Murata (2007a); Tunsiri (1994).

While progress in access to secondary education over the last half century is impressive, Thailand has not achieved its target. The National Millennium Development Goals set a target to achieve universal lower secondary education by 2006 and universal upper secondary education by 2015. Yet the enrolment ratio of secondary education was 72.8 percent in 2006, 86.7 percent at the lower secondary level and 58.8 percent at the upper secondary level (OEC, 2007*c*).

Furthermore, there is concern that the expansion of secondary school enrolment largely occurred in the 1990s and has levelled out since the education reform was launched in 1999. As mentioned earlier, the 1999 education reform aims at providing educational opportunities for all Thais and such education "shall be of quality and free of charge" (UNESCO, 2004). The Thai government began providing twelve years of free education in 2002, which was later extended to fourteen years including two years of pre-primary education. The Compulsory Education Act of 2002 mandated that compulsory education be extended from six to nine years. However, these policy measures have not yet had a significant impact on universal secondary education. Research by the National Economic and Social Advisory Council (NESAC) reports that while disabled children have had better access to education since the education reform began, there is little change in overall access (NESAC, 2005).

Equity to Access of Education

A major form of inequity relates to regional disparities. Enrolment rates at all levels of education reflect disparities in access to educational services. Secondary school enrolment is higher in Bangkok than in other parts of the country and higher in urban areas than in rural areas. The Gross Enrolment Ratio (GER) for upper secondary for the Northeast, the poorest region in the country, is only 57 percent compared to 82 percent for the Bangkok area. The GER for this level of education for the South is only 58.5 percent and 60.5 percent for the North (UNESCO, 2008).

Rural schools are generally less equipped and have fewer well-qualified teachers compared to schools in urban areas. Enrolment is also lower in districts where diverse ethnic groups account for a high percentage of the population. Although the gap narrowed from 1994 to 2002, poor and rural children are still at a great disadvantage (World Bank, 2006). Graduates of rural schools are less likely to proceed to higher education. Urban children have access to better quality schools with more opportunities to continue to post-secondary education because the majority of higher education institutions are situated in urban areas.

An analysis of Thailand's student enrolment patterns identifies the disadvantages faced by poor and rural children. A World Bank (2006) study reveals that the majority of school dropouts occur between cycles (i.e. the transition from primary to lower secondary and lower secondary to upper secondary levels). In other words, most of the out-of-school children are those who did not continue to the next cycle of schooling. The reasons cited for not continuing lower and upper secondary education are, according to a National Statistics Office's (2002) survey, the inability to pay, the need to work, distance from home to school and having sufficient knowledge to work.

In terms of gender and secondary education, unlike many other developing countries, Thai girls stay in school longer than boys. Both the enrolment ratio and the retention ratio in secondary education show that more girls are educated longer than boys. The Gender Parity Index (GPI) for girls at the upper secondary level ranges from a low of 1.12 in the North to a high of 1.32 in the South. For lower secondary, it ranges from 1.01 in the North to 1.16 in the South (UNESCO, 2008).

Government Efforts to Increase Equity of Secondary Education

The Thai government has implemented various countermeasures to increase the equity of access to secondary education for the poor. The average number of years of educational attainment is 9.8 years for the Thai population aged 15 to 21, indicating that many Thai youth leave school before completing upper secondary school (OEC, 2006). As mentioned earlier, insufficient financing is a major obstacle for many to continue to secondary education. As children grow older, both direct costs and opportunity costs become higher. In general, especially for those around 15 years of age, the choice between work and school becomes an issue. Under the education reform, the government committed to providing free education for both primary and secondary students. However, "free" education applied to tuition fees only; other expenses are to be covered by students and their families. In fact, other expenses, such as transportation to school and lunch, can be a significant burden for poor households. The 2006 World Bank study shows that school fees consist of only 10 to 16 percent of the total education-related expenditure per student at the secondary level, while food and transportation account for about 65 percent of education expenditures (World Bank, 2006).

The Thai government is providing a number of financial incentives to increase equity in access to meet the needs of poor households with children in secondary education. Government measures introduced to improve access include: (a) providing lunch, textbooks, uniforms and stationary to those in need (with coverage of 10 to 20 percent at the secondary school level, while it is nearly half at the primary level); (b) lending bicycles to eliminate transportation costs and (c) an extensive student loan fund (launched in 1996) that covers upper secondary students. While the loan scheme is unusual in its coverage of secondary education, there are serious issues in terms of its targeting the neediest students (Ziderman, 2003; Krongkaew, 2004).

2.4 Quality Issues in Secondary Education

While Thailand continues to make efforts to expand access to secondary education, improving the quality of education is the major goal of educational reform. Thai youth do not meet the national standards in academic achievement or excel in international assessments. Although academic performance is only one aspect of education, it is still an important and critical gauge of student development and national competitiveness. Furthermore, the gap in achievement indicates that the quality of education is not equitable across the nation. The current education reform strives to improve the quality of education in a comprehensive way. Teacher development is a major component in this effort.

Assessment Results Related to Secondary School Quality

The quality of education is difficult to evaluate since education covers multiple facets of human development and many of them are not easy to quantify. While recognizing this limitation, various outcome assessments, both international and national, clearly demonstrate that there is a need to improve key aspects of Thai education.

Thailand's external quality assessment (ONESQA, 2001-2005) shows that Thai children are "healthy and happy children, but lacking critical thinking abilities, solid knowledge foundation and self-directed learning", according to the MOE executives' report to the Prime Minister in August 2006. While sound personality and health are important aspects of education, developing learning abilities and knowledge is a critical role of schools.

The Thai government identified quality improvements in teaching science, mathematics and English as priorities in 1998. Science and mathematics skills are basic necessities to advance in technology and information-based industries. English, as an international language, is increasingly important since communication across nations is vital in global commerce and international affairs. Also, Thailand's rapid internationalization and its large tourism industry make English increasingly salient.

To monitor and improve their academic achievement, the Thai government began administering national tests at the end of primary, lower secondary and upper secondary levels in 2000. As shown in Table 1, Thai students do not meet the national standards which are set at 50 percent in key subjects.

Table 1: Achievements on National Tests by Thai Youth in 2006 (%)

Subjects	9th Grade	12th Grade
Thai	43.94	50.33
Mathematics	31.15	29.56
English	30.85	32.37
Science	39.34	34.88
Social Studies	41.69	37.94

Source: OPS (2006).

Thai students also do not excel in international learning achievement tests. According to the Trends in International Mathematics and Science Study (TIMSS) in 1999 (Boston College, 2001), Thai students performed poorly compared to those of Singapore, Japan, Republic of Korea and Malaysia. More recently, the results of the Programme for International Student Assessment (PISA) 2000 and PISA 2003 showed that Thai students' scholastic performance has not only been uncompetitive with other countries, it has also declined. In 2000, Thai 15-year old students scored on average 431 for reading, 432 for mathematics and 436 for sciences, when the average score of OECD participating countries was 500. In 2003, the assessment redistributed the score weight of each subject giving mathematics 60 percent, while literacy and science each received 20 percent. The resulting average score fell to 417 points, placing Thailand in 37th place among 41 countries (Klainin, 2007).

A more serious concern is the high percentage of low achievers among Thai youth. The PISA divided the scores from level one to level five, setting level two as the threshold. Above level two, students are capable of drawing links between different parts of the text and relating it to everyday knowledge. Students at this level could start benefiting from their reading skills.

In PISA 2000, while 61 percent of OECD countries' youth could benefit from their reading skills, only 26 percent of Thai youth achieved that level (level three and up). 37 percent of Thais achieved the threshold level (level two) while another 37 percent had scores at level one and lower. Worse, the percentage of lowest achievers increased from 37 percent in 2000 to 43 percent in 2003. In PISA 2003, as many as three-quarters of Thai 15-year olds scored at the threshold level or below, performing poorly compared to students of OECD countries (Klainin, 2007).

Equity is an issue not only in access, but also in the quality of education. When comparing academic achievements by regions, inequality exists in all subjects. The highest average scores in nearly all subjects were found in Bangkok. The lowest scores in mathematics, chemistry and physics were found in the poorest areas of the country (ONEC, 2001). The PISA study also reports that mathematics and reading scores are high in Bangkok and the central region, while the scores are lower in the North, South and Northeast (Klainin, 2007). Thai girls are doing significantly better than boys in both literacy and mathematics, regardless of region and types of schools (Klainin, 2007).

While the overall academic achievement of Thai youth is a concern, Thai students exhibited impressive performances in the International Olympics of mathematics, chemistry, physics, biology and information technology in 2007. Thai participants were awarded six gold, thirteen silver and four bronze medals. This tally is greater than their Japanese counterparts. Considering that Japanese youth ranked 6th and Thai youth ranked 37th among 41 countries in mathematics for PISA 2003, the achievement by the top Thai youth is striking. Furthermore, when comparing the PISA results by type of schools, the average score for literacy of 548 points by Thai secondary students in the university-affiliated schools[2] is higher by far than the OECD countries average of 500. Yet the students in the university-affiliated schools account for only 0.5 percent of total secondary school students. This data shows the rather extreme disparities in learning outcomes at the secondary school level in Thailand.

2.5 Improving Quality of Education – Education Reform

As already stressed at the beginning of this section, to improve the quality of education, the Thai government has pursued education reform since the late 1990s. The approach is comprehensive, consisting of key components: (a) ensuring basic education for all; (b) reform of the educational system; (c) promoting learning reform; (d) reorganization of the administrative structure, including decentralization; (e) introduction of a quality assurance system, (f) mobilization of resources and more investment in education; (g) enhancing the professionalization of the teaching profession and (h) introducing technologies to promote reform (ONEC, 1999). Among these components, learning reform is the core. The ultimate aim of the learning reform is "quality improvement of the Thai people for sustainable development of the country" (ONEC, 2000, p.18). The NEA emphasizes lifelong learning with a balanced orientation of knowledge, skills and attitudes. Thinking processes, such as analytical thinking,

2. This type of school is commonly known as 'demonstration school'.

creative-thinking and problem solving and moral values are to be developed in a balanced way. In the teaching-learning process, all learners are to be considered "capable of learning and self-development, and are regarded as being most important" (OEC, 1999, Chapter 4, Section 22). The "learner-centred approach" is central to the learning reform. In this approach, education should take into consideration individual learners' interests, aptitudes, pace and potential.

Section 3

Quantitative Aspects of Secondary Teachers' Issues

3.1 Demand and Supply of Teachers

Thailand strives to increase both the quality of existing education services and to expand education to reach universal secondary education. There are a number of factors to consider, but obviously Thailand needs to supply enough teachers of the right kind and to the right places if it is to be successful.

Quantitative Profile of Thailand's Teachers

Thailand had a teaching force of approximately 610,000 at the basic education level in 2006 (OBEC, 2007). The number of teachers has increased slightly over the last five years. However, the published statistics vary depending on sources and the accuracy of the marginal number is uncertain. For example, these numbers include educational administrators such as principals. The MOE is responsible for 88 percent of teachers, and the OBEC is primarily responsible for teachers at the basic education level. About 80 percent of teachers at the basic education level work for the public school system and are employed as civil servants (OEC, 2006).

There are also 123,865 teachers employed by private schools. The second largest group of teachers is under the MOI, including 61,863 working with the Bangkok Metropolitan Administration (BMA) and other municipal schools. As schools shift from the MOE to being under the local administrative organizations administered by the MOI, the number of teachers under the MOI is expected to increase (OBEC, 2007).

The exact number of teachers at the secondary school level is not obtainable from the available statistics. A major reason is that there is no longer an agency specifically responsible for secondary education as mentioned previously. Since the administration of pre-primary, primary and secondary education was integrated into basic education, the OBEC is not disaggregating the statistics for each level.

In fact, a distinctive characteristic of secondary schools in Thailand is "extension schools" where lower-secondary classrooms are added to primary schools. Extension schools contributed to

increasing access to secondary education. There were 7,034 extension schools in 2006, where 120,000 teachers were shared across the levels. About 20 percent of OBEC secondary students are studying at these extension schools. There are only 2,588 schools concentrating solely on secondary education, where 80 percent of secondary students are studying and around 110,000 teachers are teaching (OBEC, TCT, personal communication, 2008).

Nonetheless, the UNESCO Institute of Statistics (UIS) estimated that 198,287 teachers worked at the secondary education level in 2006, among which 109,430 worked for lower secondary level and 88,857 for upper secondary level. The percentage of female teachers at the secondary level is also estimated at 54 percent, with 55 percent at lower secondary and 53 percent at upper secondary levels. Approximately, 60 percent of mathematics and science teachers and over 80 percent of foreign language teachers are women. In contrast, females are underrepresented in leadership positions, such as school principals (UIS, 2006*b*).

3.2 Quantifying Overall Teacher Shortage

Thailand has a shortage of teachers in schools. Under the MOE, there are shortages in all subsectors, basic education, vocational education, higher education and non-formal education. At the basic education level, OBEC reported that the shortage of teachers was around 70,000 to 90,000 each year from 2000-2005.[3]

More recently, in March 2007, the OEC submitted findings from research on teacher shortages to the cabinet. The OEC requested 74,952 teachers to fill basic education shortages with 15,915 teachers at pre-primary, 31,159 at primary, 25,329 at secondary level and 2,549 teachers at special schools (OEC, 2007*a*). These figures include only teachers under the OBEC jurisdiction and do not include the teacher shortage for vocational schools at the upper secondary level, which is under the OVEC jurisdiction.[4]

The shortage of teachers is a serious concern for Thailand. As the MOE requests an increase of 70,000 to 90,000 teachers at the basic education level, 96.4 percent of teachers and 98.6 percent of school administrators agree the number of teachers needs to be increased (Teacher Watch, 2007). However, currently the MOE is recalculating the teacher shortage by adjusting

3. The overall shortage is estimated by the MOE based on the formula below. This formula is applied to schools which have more than 120 students. For small schools with less than 120 students, the absolute number is applied depending upon the number of students.
X = na/b
X = Number of teachers
n = Number of classrooms
a = Number of students per class (Set as 40:1)
b = Teacher student ratio (Set 1:25 for primary level, 1:20 for secondary level)

4. Teacher shortage under OVEC is estimated as 27,161 which include the shortages of the secondary level, post-secondary diplomas level and short courses. The calculation is made based on there being approximately an equal number of teachers from secondary and post-secondary levels teaching short courses, and approximately 70% percent of degree students are at the upper secondary level.

the formula. The recalculated estimation of the teacher shortage is expected to be around 30,000.

Furthermore, the overall shortage can be reduced by various measures. The OEC indicated that the teacher shortage could be reduced from 74,000 to 50,000 at the basic education level, if certain suggested measures are implemented. Among these are: (a) adjusting the number of secondary school teachers from 2.0 to 1.6 teachers per class; (b) using more distance education and IT in teaching; (c) changing the managerial model to the one-school, one-teacher approach, targeting 2,135 schools with less than 120 students, which could relieve the problem of teachers' shortage by three percent; (d) assigning more student-teachers to small schools; (e) hiring more contract teachers; (f) transferring teachers from schools with surpluses to schools with shortages (5,448 cases in 2006-2008); (g) providing administrative support staff; (h) encouraging the expansion of private schools and (i) the dissolution of 3,238 small schools with less than 60 students (OEC, 2007a).

These measures, which reflect the direction of education reform, are not easily implemented. For example, the MOE promotes participation of the non-government sectors' provision of education in order to reduce the financial burden of the central government. It is trying to increase the ratio of private school enrolment to 30 percent by 2010. However, to date, the growth of the private sector delivery of education has been limited. Also, transferring school administration from the MOE to local administrative organizations has stalled as mentioned previously.

In the short-term, hiring contract teachers is the most practical measure to best reduce the teacher shortage. As a result of new budgeting procedures under the educational reform, cost-per-head subsidies are provided to schools which then manage their own budgets. If schools have large enrolments generating substantial revenues, they can use this income to hire more contract teachers. Some schools also use donated funds and collect money from parents to hire more teachers. Larger schools and those in urban or wealthier locations have a better chance of hiring additional teachers and/or support staff with their own funds.

According to data from the Bureau of Information and Communication Technology, OPS, in 2007, there were 19,711 teachers who received salaries from the government without holding the status of civil servants (OPS, personal communication, 2007). In addition, there were also 8,180 teachers who were hired directly by schools on an annual contract. Contract teachers tend to be recent graduates waiting for a regular civil servant position. Sources of funding for the contracted teachers vary.

In Thailand, teachers are highly respected. *Wai Kruu* (teacher) Day is an annual ritual in which all students show respect to their teachers. Also, teachers are civil servants (*karatchagan)* which literally means to serve the King. Since the King is highly respected, becoming a teacher and civil servant means more than an occupation, as pride and prestige come along with the position. Job security is also a major benefit of being a civil servant. But contract teachers lack this status. It is not known whether contract teachers will stay in an uncertain position for an unknown period to commit themselves to teaching. Also, given their low salaries, if the status of civil servants is not guaranteed, Thailand may lose these young capable teachers to other sectors.

Out-of-Field Teaching

Another aspect of the teacher shortage in Thai education is out-of-field teaching. Out-of-field teaching refers to the extent that teachers teach a subject in which they are not qualified. Note that out-of-field teaching results not only from teacher shortages, but also from the way schools manage human resources. The available data on out-of-field teaching (Ket-sing, 2006; Siribanpitak, 2005; Siribanpitak and Boonyananta, 2007) show major teacher shortages in key subjects.

More teachers are needed in all core subjects, especially foreign languages, mathematics and science, according to OEC research submitted to the cabinet. The shortage was calculated based on the number of subject instruction hours and the number of teachers teaching the subject in each school. The Thai curriculum has eight core subjects: Thai language; mathematics; science; social studies, religion and culture; health and physical education; art; occupational and technology-related education and foreign languages. Among them, foreign languages (primarily English), mathematics and science are regarded as critical and the shortage is more severe in these subjects. In 2005, there was a shortage of roughly 10,000 teachers of foreign languages—8,000 teachers of mathematics and 8,000 teachers of science (OEC, 2007*a*).[5]

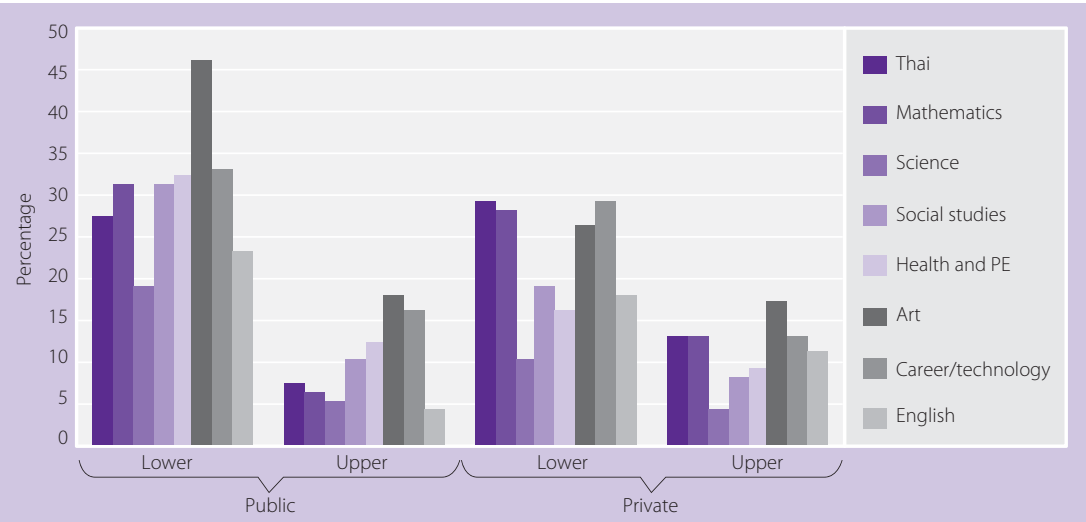
Ket-sing (2006) found that a significant number of secondary schools in Thailand do not have teachers who majored in the critically needed subjects, especially at the lower secondary level.[6] As many as 80 percent of lower secondary schools and more than half of upper secondary schools do not have teachers with majors in mathematics and computer science. About 60 percent of lower secondary schools do not have teachers with majors in science and 45 percent of them do not have teachers with English majors.

According to research by Siribanpitak (2005), 22.7 percent of secondary school teachers did not teach the subjects of their major or specialization in 2004 (see Figure 2). The out-of-field teaching practice is most common at public lower-secondary schools (Siribanpitak and Boonyananta, 2007). Out-of-field teaching occurs with more than 20 percent of teachers. In the important field of mathematics, for example, at the lower secondary level (public schools), more than 30 percent of teachers are not trained in this subject.

5. OBEC has a different estimation as follows: English (15,000), Science (12,062), Mathematics (11,617), Occupational skills (7,483), Art (7,211), Thai (7,075), Health (6,390) and Social study (5,289). However, the major shortages in the critical subjects are consistent.

6. Ket-sing analyzed information on 98 percent of OBEC teachers using data from the Bureau of Information and Communication Technology, Office of the Permanent Secretary.

Figure 2: Percentage of Out-of-Field Teaching at the Secondary Level, 2004



Note: PE = Physical Education

Source: Siribanpitak (2005, p. 7, Table 5).

In Thailand, the newly established teacher licensing system requires a bachelor's degree in education, but the qualification does not specify the subjects of specialization nor the levels of teaching (see also Section 4). There is no regulation or enforcement to restrict out-of-field teaching. However, the above research shows the consistent trend of a teacher shortage in critical subjects, especially at lower secondary schools, which includes extension schools.

The MOE is providing various in-service teacher training programmes to address out-of-field teaching, especially in science, mathematics and English. International organizations such as UNESCO and the World Bank recognize the weakness of teaching in these subjects and provide some assistance. Some teachers positively evaluate the in-service training programmes, saying that their teaching skills have become more professional (Phetdee, 2007). However, the effectiveness of these training programmes needs to be carefully evaluated.

Teacher Shortages in Rural and Economically Disadvantaged Areas

While the overall teacher shortage is an issue for Thai education, perhaps a more serious challenge lies in the teacher shortage in rural and disadvantaged areas. Teacher shortages in critical subjects, namely mathematics, science and foreign languages are particularly severe in small and rural schools and contribute to inequity in the quality of education as mentioned previously.

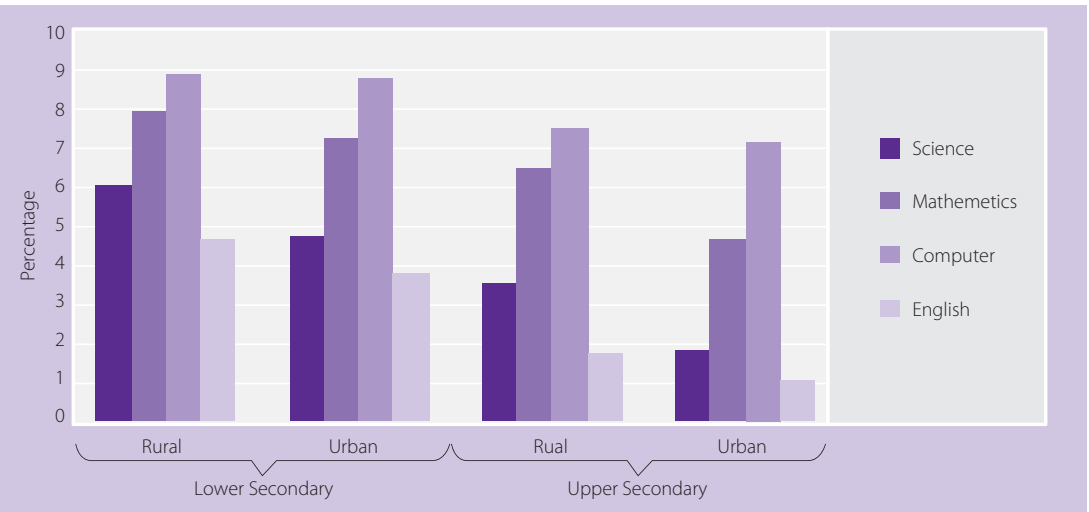
The teacher shortage is most serious in the poorest provinces. On the one hand, according to the analysis of secondary education in the PISA by the Institute for Promotion of Teaching Science and Technology (IPST), the Bangkok Metropolitan Administration (BMA) is the only area that has a demand for teachers less than the OECD country average (Klainin, 2007). On the

other hand, OBEC data (OBED, 2007) shows that 18 of 175 ESAs do not have enough teachers to place a teacher in each class. The most severe situation with respect to this indicator is Mae Hong Son ESA 3, an area located in the remote Northwest of Thailand with a large percent of diverse ethnic communities. It is also the poorest province in Thailand. Its ratio of teachers to classes is alarmingly less than 63 percent (OBEC, 2007).

These 18 ESAs with serious teacher shortages also have high percentages of disadvantaged students and 72 percent of them are located in the more remote North and Northeast. The disadvantaged include those who suffer from forced labour; participate in the sex industry or are orphans, homeless, HIV/AIDS-infected, physically-abused or substance abuse users (H.R.H. Princess Maha Chakri Sirindhorn, 2004; OBEC, 2007).

Rural areas are also disadvantaged with respect to lacking teachers with training in key subjects (Ket-sing, 2006). Rural schools have fewer teachers who majored in critical subjects at both the lower and upper secondary levels (see Figure 3).

Figure 3: Schools Lacking Teachers Having Majored in Critical Subjects: Rural vs. Urban Areas



Source: Ket-sing (2006).

Ket-sing (2006) also analyzed the shortage of teachers by school size. At both the lower secondary and upper secondary levels, the shortage is more serious at small schools. The larger size schools have more teachers who majored in critical subjects. This trend is most clear for science and English. The percentage of schools at the lower secondary level that do not have teachers who majored in science decreases from 85.7 percent for large schools to 13.7 percent for small schools, and English decreases from 74.3 percent to 7.8 percent. The same trend is seen at the upper secondary level. Although it is more serious at small schools, the shortage of mathematics and computer teachers is severe for all schools.

The high percentage of out-of-field teaching and more severe shortages in critical subjects at lower secondary schools may be explained by school size. Around 80 percent of lower secondary schools are either small (less than 120 students) or medium-sized (121-600 students) schools (Ket-sing, 2006). While these schools provide greater access to students in rural areas, the teaching quality is questionable as they do not have teachers specialized in critical subjects.

Pupil-Teacher Ratio

Although the MOE clearly makes the case for teacher shortages, some argue that there are enough teachers in schools, since Thailand's student-teacher ratio is seemingly quite adequate. The national average pupil-teacher ratio is within the reasonable range, 21:1 for lower and upper secondary, while it is high at 31:1 for upper vocational secondary (OEC, 2005; OEC, 2006). In fact, the 1999 ADB's Social Sector Programme Loan agreement in terms of conditionalities, mandated that the ratio be raised to 1:25 to increase efficiency.

However, these national averages do not necessarily reveal the complex picture of the shortages. One factor is small schools. Nearly 40 percent of Thai schools have less than 120 students, and 77 percent of all OBEC schools have less than 500 students (OBEC, 2007). The student-teacher ratio of small schools is 14:1, which lowers the national average significantly. For large schools with over 500 students the pupil-teacher ratio is a higher 24:1. A complex anomaly is that the low pupil-teacher ratio does not mean that small schools have an adequate number of teachers. In small schools there are 0.73 teachers per classroom, meaning there are not enough teachers to cover every classroom, which definitely affects the quality of learning. This is due to the small class size. For larger schools, the ratio is 1.35 teachers per classroom.

Considering cost and efficiency, it is not feasible to allocate teachers to small schools at the same rate as the bigger schools. Nonetheless, smaller schools obviously do not have teachers who specialize in all eight core subjects. The MOE is trying to consolidate small schools to address the teacher shortage and improve quality.

3.3 Supply of Teacher Candidates

While Thailand has a shortage of teachers in its schools, it has been producing enough graduates with teaching degrees to fill this demand. In other words, Thailand faces the paradox of simultaneously having a shortage of teachers and an oversupply of faculty of education graduates. As of 21 January 2008, there were 812,904 teacher licenses approved by the Teachers Council of Thailand (TCT, personal communication, 2008). This number includes in-service teachers and those who are qualified but not currently in the teaching profession. Application for teaching licenses is voluntary, indicating that there are more qualified teacher candidates who have not applied for their licenses.

Currently the major producers of teachers are the faculties of education at universities. In 2007, there were 64 universities offering education programmes throughout the country. Forty of these are the faculties of education at the Rajabhat Universities, and most of the remaining are at 16 major public universities.

The Office of the Higher Education Commission (OHEC) statistics show that while the number of entrants in the bachelor's programme in education has decreased slightly between 2004 and 2006, entrants in diploma programmes and graduate programmes in education have increased. Altogether, there are approximately 20,000 entrants in education programmes each year. However, this is a substantial reduction compared to 1997. In the past, the qualifications to become a teacher required a bachelor's degree in education or a bachelor's degree from other disciplines plus 24 credits in education. However, enforcement was weak. Thailand allowed those with four-year bachelor's degrees, regardless of major, to take an exam to become a teacher. In other words, graduates from universities were eligible to take exams to become teachers. Therefore, in the past Thailand had an even wider pool of teacher candidates than the number mentioned earlier (Pitiyanuwat, 2001). Siribanpitak, former Dean of Chulalongkorn's Faculty of Education and the chairperson of the Deans' Council, estimated that Thailand has produced around 15,000 education graduates annually since 2000 (Siribanpitak, 2005).

While Thailand's overall teacher supply is enough to fill the demand, the data on the supply of teachers in each subject are not available. Due to the decentralized nature of Thai higher education, no statistics have been compiled by the OHEC or other government agencies on the number of students majoring in each subject or level.

3.4 Thailand's Teacher Shortage Explained

Even though Thailand has an adequate supply of teacher candidates, there are several reasons for the teacher shortage, which include: (a) the Thai government's downsizing policy encouraging early retirement; (b) limitations in the personnel management system and (c) absence of projection and coordination mechanisms.

Thai Government's Downsizing Policy

The primary reason for the anomalous phenomenon of a shortage of teachers in schools and an oversupply of graduates is the Thai government's downsizing policy. In line with the 2002 Bureaucratic Reform Bill, the Thai government has been trying to streamline its bureaucratic system by reducing the number of civil servants. However, this downsizing policy has contributed significantly to the teacher shortages and consequently the MOE has had to negotiate a budget for the recruitment of new teachers during the last few years.

Recruitment of new teachers is strictly limited. Since 2004, 2,000 to 7,000 positions have been periodically offered to recent graduates, with an average of 4,000 positions annually. Given that there are 15,000 teacher candidates graduating from faculties of education annually and an even larger number of graduates from previous years, once a position opens, the vacancy is filled quickly. For example, in 2004, there were about 120,000 applicants for 6,802 positions for OBEC schools. Once a candidate takes an exam, the result is valid for two years. Recruits will be selected from the pool of those who have taken the exam. OBEC has not provided the exam since 2004 due to limited recruitment funds (OBEC, personal communication, 2007).

The decrease in the number of teachers has been accelerated by the early retirement scheme. As a part of the administrative reform, the Thai government introduced early retirement

packages to reduce the number of civil servants. Teachers aged over 50 were eligible. While the policy has helped the education reform by streamlining the system, there were an unexpected number of teachers opting for early retirement. For example, from 2000 to 2005, the number of teachers retiring at the usual age of 60 was 15,102. However, 56,180 teachers took early-retirement packages (OBEC, personal communication, 2007). Because the most qualified individuals may have the best alternative employment opportunities, it is likely that among those retiring early were many excellent teachers.

During the third round of early retirement, the Education Minister at the time stated that he was "totally against this early retirement scheme" (Bunnag, 2007). A total of 70,000 teachers took the first and second rounds of early retirement schemes, while the MOE schools were understaffed by 90,000 teachers (Teacher Watch, 2007). The Thai government also had a policy of freezing employment. The minister was cited as saying: "those who left in the first and second rounds of the retirement scheme have left a lot of extra work for the remaining staff. The government should spend money on hiring more specialized teachers in the fields we need, rather than paying more to the teachers who are resigning" (Bunnag, 2007).

To help solve the shortage, the Thai government has made an adjustment in the early retirement policy for teachers. In general, the government policy was to fill only 20 percent of the positions of those retiring. However, since 2004, the government changed the policy for teachers, permitting 50 percent of the positions of those retired to be filled. In 2007, the cabinet raised the approved figure to 100 percent. Yet filling the positions of those retired does not necessarily lead to the immediate hiring of new teachers. In 2007, the respective ESAs received funding to fill only two percent of the positions of those who retired, resigned or died, according to an interview with a government official. If true, this represents a huge gap between national policy and actual implementation at the local level.

Limitations of Personnel Management System

The current personnel management system does not meet the needs of many schools. In particular, the recruitment, posting and transfer of teachers are not organized well enough to meet actual teacher needs. School participation in personnel management is quite limited. Decentralization of administration, a major theme of reform, is a difficult policy to implement. Under the reform, 175 ESAs (recently increased to 185) were established, but their roles and degree of decision-making power are not clear and vary significantly by school and ESA.

Regarding the recruitment of teachers at the basic education level, there are three agencies involved: OBEC, the Teacher Civil Service and Educational Personnel Commission (TEPC) and the Budget Bureau of the Ministry of Finance. The TEPC was established in December 2004, in line with the 2004 Public School Teacher and Educational Personnel's Act. The TEPC is a central government agency which supervises the personnel administration of all public school teachers and educational personnel within the jurisdiction of the Ministry of Education. The TEPC is responsible for policies on personnel administration for public school teachers, establishing rules, regulations and criteria related to teacher personnel administration.

The OBEC collects information on the needs of teachers from each school through the ESAs and makes a proposal which needs to be approved by TEPC and the Budget Bureau. The OBEC identifies the number of teachers needed using a specific mathematical formula. These guidelines are used across the nation by OBEC, except for small schools which have less than 120 students, welfare and special schools. When the government budget is set for the new fiscal year, the budget for teacher recruitment is set accordingly. The TEPC will then negotiate the allocation of recruitment with OBEC, the 185 ESAs and other ministries involved in education.

In this process, the recruitment of teachers is largely determined not by needs, but by government budget and policy. Given the government's downsizing policy, the budget being allocated is insufficient. There is intense competition for the limited number of teacher slots approved among the ESAs and among schools within each ESA. It is not clear whether schools are recruiting teachers in the needed subjects or whether disadvantaged areas and schools are receiving special consideration.

Selection of recruits occurs in three ways: examination and recruitment of recent graduates, placement of government scholarship recipients and hiring local experts. According to an official of TEPC, 90 percent of teachers are recruited through the examination system, but about five percent received government scholarships with the condition of becoming public school teachers after graduation. A small number of teachers are also recruited from local experts since the education reform requires local content in the curriculum such as Thai wisdom.

The postings, however, do not necessarily match the needs of schools. Out-of-field teaching practice is common and it happens even to teachers majoring in the critical subjects where shortages are severe. A related major complaint of the Institute for Promotion of Teaching Science and Technology (IPST) scholarship recipients, who specialize in teaching mathematics and science, is that they have to teach subjects for which they are not trained, even though there are severe teacher shortages in mathematics and science. Other complaints include the lack of teaching resources and excessive workloads.

Perhaps the deployment of teachers is a more serious problem since significant teacher shortages are seen in more disadvantaged areas. In Thailand, once teachers are posted, they continue to stay at a school unless they request a transfer which is accepted by another school. Transfers are only considered for teachers' personal reasons such as family union and a return to one's hometown. However, the needs of schools are ignored. Accordingly, even if the number of students decreases, the number of teachers may remain the same. In fact, a study in 2007 shows that 5,165 schools had a surplus of 10,280 teachers at the basic education level (OEC, 2007*a*).

Absence of Projection and Coordination Mechanism

There is no agency projecting the demand for teachers and there is a lack of readily available basic data regarding the demand and supply of teachers. The teacher shortage has been acknowledged by various agencies, but the projection of future needs for teachers has not been studied. Furthermore, the development of teachers is not systematically planned at the higher education level.

An absence of a projection mechanism affects planning of pre-service teacher education programmes. Each faculty of education develops its programme based on their expertise and policy. Yet there is no effective coordination on teacher development at the national level even though all related agencies are now in a single ministry. Although the number of graduates from major disciplines is not available, education faculty deans interviewed for this study are concerned that Thailand is producing too many social science majors, but not enough graduates in the critical subjects that have a shortage. While the shortage of teachers in English, mathematics and science is a concern, there is no coordination or support system to promote pre-service teacher training programmes in these critical subjects.

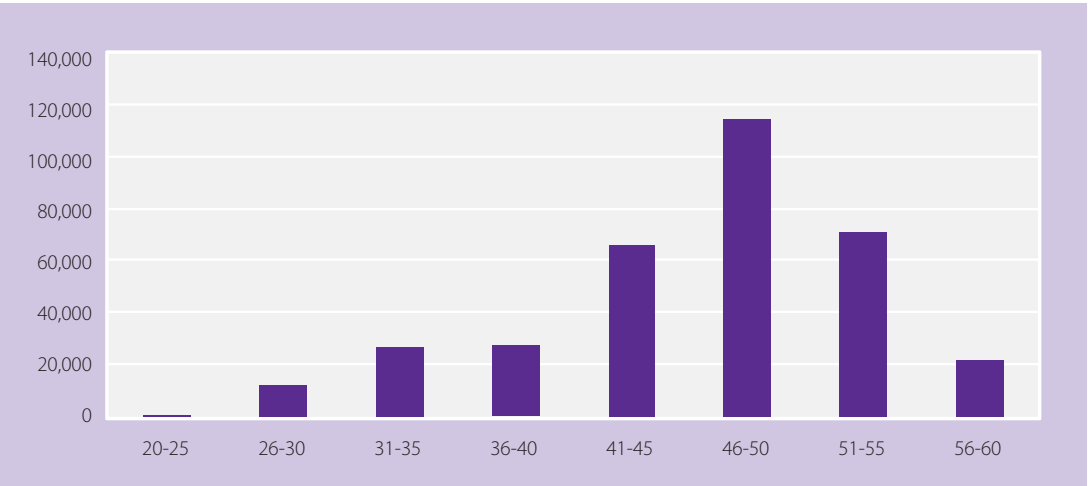
But special agencies do exist to improve education in these critical subjects. However, these institutions do not play a role in projecting needs. Regarding English, the English Language Institute (ELI), under OBEC, was established in 2007. The ELI provides training to in-service teachers and is collecting basic data on English teachers, including the extent of the shortage. Regarding mathematics and science, the Institute for Promotion of Teaching Science and Technology (IPST) is an independent agency responsible for promoting excellence in mathematics and science education. Although the IPST is providing scholarships and training programmes to increase the number of quality science teachers, it is not involved in assessing the need for or supply of such teachers.

3.5 Future Projections of Teacher Need

Future trends indicate that there will be an increasing demand for teachers as a large number of them are reaching retirement age. Furthermore, more teachers will be needed as Thailand strives to universalize secondary education. However, this demand will be tempered by a decreasing secondary age population in Thailand.

Thai teachers are aging. The age distribution of Thai teachers is skewed to those above 45 years old. In 2005, of 340,355 OBEC teachers, those older than 50 represented 27.2 percent, and those aged 45 and over comprised 60.8 percent (see Figure 4). Since OBEC has hired only 4,000 teachers per year for the last few years and a substantial number of teachers will retire in 10 to 15 years, a shortage of experienced teachers is predicted.

Figure 4: OBEC Teachers by Age in Thailand 2005



Source: OBEC (2005).

Thailand has been highly successful in its family planning efforts. The Thai secondary school-age population will be declining in the coming years. According to forecasts of the National Statistics Office (2002), the population aged three to 21 will likely decrease from 22.4 million in 2005 to 21.1 million in 2016. The decrease at the secondary level is significant. Nonetheless, nearly 30 percent of Thai youth are still not enrolled in secondary education. Extending secondary education opportunities means that more teachers are needed, especially in rural and disadvantaged areas. Under the reform, compulsory education is now nine years, and the government is providing free education for 14 years to extend educational opportunities for all Thais.

In order to increase enrolment and expansion of secondary education, this study estimates that between 3,000 and 10,000 teachers need to be hired per year at the secondary education level to meet demand from 2008 to 2020. This estimate is based on the new MOE formula announced in December 2007 to promote greater efficiency. In total, around 77,500 teachers need to be hired over the coming 13 years.

There are three main factors of demand underlying this projection: (a) the decreasing population of secondary school-age Thais; (b) the age distribution of the current Thai teaching force and (c) meeting universal secondary education goals.

Due to the changing population demographics, the secondary school age group will decrease from 5,816,035 to 4,662,260 from 2008 to 2020. This is a total decrease of 19 percent, or approximately 1.6 percent per year. Considering this factor alone a reduction in teachers of 55,984 would be in order.

Secondly, based on the age of the current teaching force, the number of teachers retiring will increase significantly to an average of 6,892 annually from 2011 to 2015. In the following five years (2016-2020), the average number of retirees will increase to 11,323 annually. In total, this accounts for an increased demand of 96,985 teachers from 2008 to 2020.

Finally, to reach the goal of universal education for secondary schools by 2015, approximately 50,000 additional teachers, or 6,142 per year, will be needed over the next eight years. It is important to note that these figures do not include early retirement or teacher turnover.

Nonetheless, the trends are clear: the decreasing population factor is outweighed by the need for teachers due to projected retirement and the expansion of education to meet universal education goals. A plan to meet this challenge through increased hiring and/or change of policy (e.g. increasing retirement age to 65) is needed. There is also a significant need for more teachers to expand access to education.

Section 4

Quality of Secondary School Teachers

4.1 Quality of Teachers

Improving the quality of education is the primary objective of the education reform and improving the quality of teachers is critical to meet this broad objective. Thai youth are not meeting the national standards of learning achievement or competing well internationally. While various factors are involved in students' learning, enhancing professionalism in teachers and improving the quality of teaching is considered vital to improve the quality of education. Along with the initiation of the current education reform, the Teacher Education Reform Office (TERO) task force on teacher development was established. Its chairperson stressed the need to improve the quality of teachers:

> It is quite essential to upgrade teachers and teacher education because the teachers play a key role in education of the youth of Thailand. 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 under-qualified. (Chulavatnatol, 1997)

Under the current education reform, teachers are provided with increasing responsibilities for what and how to teach within their classrooms. Instead of drilling from textbooks, following curriculum and telling students what they should know, teachers' roles are to develop meaningful tasks for students, guide their learning through thinking processes and help students evaluate their own progress. These new roles call for a much higher degree of teaching skills. Professional development too needs to be provided on a continual basis for both new and in-service teachers.

Although research in the Thai context is limited, a 2007 study shows that teacher characteristics are positively correlated with 12th grade students' academic achievements (Ket-sing, 2007). On the one hand, teacher characteristics were defined according to the standards of the Teachers Council of Thailand: having self-discipline, love, faith and responsibility for the profession, caring for students, encouraging students to achieve their potential, being a good role model, not abusing their authority and being a leader. On the other hand, TIMSS showed that Thai teachers' confidence in teaching mathematics and science was low. More than half of all students were taught by teachers who felt inadequately prepared and their test

scores correlated with the level of teachers' confidence. Although it is not clear to what extent indicators such as teachers' characteristics and confidence explain students' performance, the research shows that they are important aspects of the quality of teachers.

Decline of Teacher Status

Somwung Pitiyanuwat, Director of ONESQA, who wrote a proposal for teacher reform commissioned by the OEC, stated that "the status of teachers in Thailand has been declining." He explained the situation as follows:

> In Thai society, especially in the past, teachers enjoyed a high social status. In the past, intelligent and well-behaved students became teachers by choice, entering the teaching career with passion and high teaching spirit…However, social changes during the past decades have had a negative impact on teachers and the profession… the status of teachers is now deteriorating because the teachers' earnings have become too low, in comparison with those of other professions...[Therefore] few qualified people choose to enter into the profession. Those who do, often view teaching only as paid employment without dedication like their predecessor. (Pitiyanuwat, 2003, p.103)

In addition to anecdotal evidence, some data indicate that the teaching profession is not associated with the high social status of the past and, accordingly, is not attracting the brightest students. In 2006, Thailand conducted its first ranking of universities and faculties. The Faculty of Education at Chulalongkorn University was ranked first among education programmes in the nation. However, the entrance exam scores by students in the Faculty of Education are among the lowest at the university. The highest scoring students in education had scores similar to the lowest scoring students in economics and liberal arts, for example (OHEC, 2006).

Chulalongkorn's Faculty of Education is the third most popular faculty among high school graduates. But the majority do not become teachers, preferring to work for the private sector instead (Siribanpitak, personal communication, 2008). They may have applied for this faculty as a strategy for gaining entrance to Thailand's most prestigious university without a genuine interest in education or teaching.

In fact, the top priority of TERO was to "turn the unpopular teaching profession into one of the most desirable careers in the country" (ONEC, 1998, p.131-2).

While the teaching profession may be "unpopular" among the best students, it is still for the educated, if not privileged, and becoming a teacher is actually highly competitive. There were over 120,000 applicants for 6,802 positions in 2004, according to an OBEC official. In other words, approximately only one out of 20 candidates obtained a position.

Anecdotal evidence suggests that there are regional differences regarding the attractiveness of the teaching profession. Becoming a teacher, an intellectual and a civil servant is a more appealing profession to those in rural areas. In urban areas where alternative occupations are available, teaching is less popular because of heavy workloads, low salaries and the decline of teachers' status.

Qualifications and Attitudes of Thai Teachers

Thai teachers are well-educated considering that the average national educational attainment is 7.8 years for the Thai population aged 15 and older (OEC, 2006). At the basic education level, more than 85 percent of teachers hold a bachelor's degree or higher. Furthermore, their educational background has strengthened over the last few years. The percentage of teachers who have lower-than-bachelor's degree qualifications decreased to less than half and those who have post-graduate degrees nearly doubled from 1998 to 2005. The level of education for teachers is higher at the public schools than private schools. According to the *Thailand Education Statistics Report*, while only 2.9 percent of public school teachers do not hold bachelor's or higher degrees, 17.1 percent of private school teachers do not hold a bachelor's degree (OEC, 2005).

Secondary school teachers are highly educated professionals. They have higher academic qualifications than primary school teachers. One third (33 percent) of secondary school teachers hold masters' degrees or higher, while the majority (88 percent) of primary school teachers' highest qualification is a bachelor's degree (Siribanpitak and Boonyananta, 2007).

Furthermore, the academic qualifications of teachers are equally distributed across the nation. Siribanpitak and Boonyananta (2007) found that there is no difference in OBEC teachers' academic qualifications in urban and rural areas. This may explain the high standing of teachers in rural areas relative to urban areas.

Despite the recent decline in status, teaching is still a valued occupation for many Thai teachers. Teacher Watch (2007) surveyed attitudes toward the teaching profession (Teacher Watch is a collaborative research project of NIDTEP and the Ramjitti Institute of Chulalongkorn University). The survey was conducted by a questionnaire with a sample of over 7,000 teachers and administrators throughout the nation. Thai teachers show positive attitudes towards their profession. They are proud of being teachers and believe in students' potential.

Results from the PISA study also support the finding that teachers have positive attitudes. About 80 percent of students reported that their teachers showed an interest in every student's learning, gave extra help when students needed it, continued teaching until students understood and gave students the opportunity to express their own opinions (IPST, 2003). The data indicates that Thai teachers are providing favourable learning environments.

At the same time, however, Teacher Watch data shows that teachers have complex and somewhat ambiguous feelings about their profession. For example, 48 percent of teachers and 35 percent of administrators have thought of changing their occupation. Sixty-one percent of teachers and 44 percent of administrators are interested in joining the early retirement scheme. While 29 percent of teachers and 37 percent of administrators still want their children to become teachers, their declining social and economic status appears to be discouraging (Teacher Watch, 2007).

ONESQA's Evaluation of Teachers

While Thai teachers are highly educated, the quality of teachers remains a target of criticism. The evaluation conducted by the Office for National Education Standards and Quality Assessment (ONESQA), an external evaluation agency, indicates the challenges that Thai teachers face. Although Thai teachers are well qualified, they are often not assigned to teach their specialized subjects due to teacher shortages. Also, Thai teachers are not well prepared for using learner-centred and inquiry-based pedagogies.

Under the reform, ONESQA completed the first round of external assessment of school quality in 2005. Among 30,010 schools at the basic education level, only 35 percent were assessed "good", while 65 percent did not meet ONESQA standards (see Box A).

The ONESQA set 14 standards to evaluate school quality based on the abilities of students, teachers and administrators, as well as school resources. The two standards related to teacher quality are: (a) whether schools have enough teachers who have sufficient knowledge and ability to teach and hold the appropriate degree and (b) whether schools have teachers who have abilities to deliver effective and learner-centred teaching. The first standard is related to out-of-field teaching and teacher shortages. Nearly half (48 percent) of the schools did not meet this standard. Regarding the second standard, only 33 percent of schools have teachers with the ability to deliver quality teaching and the learner-centred approach. The ONESQA reports that most schools have "qualified" teachers but face a shortage of those who utilize the learner-centred approach well, especially in rural and small schools (see Figure 5).

Figure 5: Percentage of Schools Reached ONESQA Teacher Standards by School Size, Location and Region

Source: ONESQA (2006).

This finding has been consistent with other studies over the years. A study by MOE in 1999 found that the majority of Thai schools have teachers with adequate and relevant qualifications (95 percent) and are professionals endowed with high moral principles (93 percent). However, just more than half of schools (55 percent) had teachers who could provide student-centred learning, and less than half of the schools (45 percent) had teachers with good abilities to search for knowledge, think analytically, conduct research and create knowledge (MOE, 1999). More recently, Teacher Watch (2007) reports that while Thai teachers have positive attitudes toward the profession, only 50 percent of them have adopted the learner-centred approach.

Box A: Office of National Education Standard and Quality Assessment (ONESQA)

Under the reform, the Office for National Education Standards and Quality Assessment (ONESQA) was established in November 2000 as an independent agency for external evaluation. All educational institutions, both basic and higher education, are to undergo external quality evaluation at least once every five years. The outcomes of the first round of evaluation (2001-2005) have been made available to the public (www.onesqa.or.th). The initial results of a second round of assessments have been reported as well and show considerable improvement.

Impact of the Teacher Shortage

The role of teachers in students' academic performance has to be carefully considered since multiple factors are involved. However, the shortage of teachers negatively affects the quality of teaching. As discussed earlier, teacher shortages cause out-of-field teaching and heavy workloads. The PISA study found a correlation between principals' perception of teacher shortages, which is the highest among all participating countries, and students' performance, particularly in mathematics. The more severe the shortage is, the lower the test scores (Klainin, 2007).

A more serious concern is that the teacher shortage, which is more severe in rural and small schools, may be contributing to inequity in the quality of education. When reviewing ONESQA's outcomes by school size, location and region, there is a correlation between these factors and assessment results. The larger urban schools are more likely to meet teacher-related standards. Although the regional difference is not as clear, the poorer regions such as the Northeast, South and North face more difficulties in attaining the standards.

In 2007, Ket-sing studied the factors affecting the quality of education in Thailand, sampling around 28,000 teachers in over 2,000 schools. With regard to 12th grade students' academic achievements, he found that urban schools and larger schools have a positive impact on students' scores in national tests (Ket-sing, 2007). Quality teaching at those schools may account for the higher scores students achieve.

The major goal of Thailand's educational reform is to improve the quality of education. Teachers are expected to play the critical role in facilitating the transformation away from the traditional teaching approach. Various data suggest that Thai teachers are a highly educated group who are dedicated and committed to the profession. However, because Thai students' academic performance does not meet the nation's expectations, or compares favourably internationally,

the teacher shortage has to be solved. Teachers must continue to improve their teaching skills to effectively use the shifting education paradigm and pedagogy.

4.2 Thai Efforts to Improve Quality of Teachers

With the current education reform, Thailand has made significant efforts with regard to teacher development by establishing a teacher licensing system, extending the duration of pre-service teacher training programmes, recognizing outstanding teachers with awards, providing a series of in-service training programmes and improving teacher compensation. All aim at upgrading the teaching profession. In addition, scholarships have been provided to attract high quality students to the field of teacher education.

Establishing a Teacher Licensing System

The NEA mandates that all in-service teachers and school directors hold a professional teaching license. A teacher licensing system is considered a key quality assurance aspect for education. Subsequently, the Teachers and Educational Personnel Council Act of 2003 passed and mandated the establishment of a teacher licensing system. The former Teachers Council of Thailand was reorganized into two agencies, the Teachers Council of Thailand (TCT) and the Office for Welfare and Security Promotion of Teachers and Educational Personnel.[7] The TCT is responsible for setting professional standards, issuing and revoking professional licenses and monitoring adherence to professional standards and ethics. A fund was established to help raise professional standards through grants and rewards for innovation and excellence in teaching and research. The licensing system requires a bachelor's degree in education as a minimum requirement and the license must be renewed every five years.

The teacher licensing system is supported by the Thai public. A hearing with 2,500 people from more than 30 provinces organized by the OEC and a Suan Dusit opinion poll of 2,000 people showed that more than 90 percent of respondents agreed that licensing would raise education quality (ONEC, 2001*b*). Those interviewed for this study also support the teacher licensing system. However, the development of a fair and reliable evaluation and licensing system is an urgent issue needing attention.

In 2005, the Teachers Council of Thailand published the Education Professional Standards, consisting of standards for professional knowledge and experience, performance and conduct. The standards are a prerequisite to applying for the license. Standards for performance are to maintain and improve the knowledge, capabilities and expertise of teachers so that the license can be renewed every five years. Standards for conduct are related to professional ethics. If teachers violate them, the consequences are dismissal, warning, probation, suspension of the license for a period as deemed appropriate but not to exceed five years or revocation of the license (Teachers Council of Thailand, 2005). Yet how the standards are

7. According to the MOE new administrative structure, this office is called the Office of the Welfare Promotion Commission for Teachers and Educational Personnel.

applied, and who is going to evaluate the teachers, are still unclear. Furthermore, how TCT will coordinate with other agencies such as OBEC, ONESQA and TEPC in evaluating teachers has to be resolved. Each agency has its own standards, which are similar but not identical, and are not coordinated with each other. Similar standards in different formats cause cumbersome paperwork for teachers.

As a transitional measure, all in-service teachers were provided with a teacher's license. In the initial stage the plan was to give teachers who had a less-than bachelor's degree a temporary license as they were expected to pursue a bachelor's degree during a grace period. However, the plan was adjusted and all teachers were given licenses with evidence of having attended some training programmes. Teacher licenses are renewable every five years and the first renewal process started in 2008. The renewal form is under review, but the current process includes self-reporting paper work. The Teachers Council of Thailand examines and approves the curriculum of each pre-service and in-service training programme. Teachers report how many training programmes they have attended. Attending approved training programmes is a major factor for renewal. Yet, in-service teacher training programmes in Thailand have been criticized for their inefficiency (see the following section on in-service training programmes). It remains to be seen whether attending them ensures that standards of performance are being met and whether the process genuinely gauges teachers, or remains as nominal paper-work.

Furthermore, the licenses are not subject or level specific. They are given to teachers as educational practitioners, but not as mathematics or English majors, or primary or secondary school teachers. Out-of-field teaching is a significant problem in Thai education, but the current teaching license gives teachers the credentials to teach any subject at all levels. The senior officials of the Teachers Council of Thailand are aware of the issue. According to the Secretary-General of TCT, given the shortage of teachers and the limited number of positions being recruited, it is difficult to restrict what teachers can teach with the license. Also, the teaching license system is new to Thailand and changes should be considered gradually.

Although many issues need to be solved, the chairperson of the TCT Board believes that having teacher licenses "is still much better than before the reform" (Sermsak Wisalaporn, personal communication, 2007). The teacher licensing system provides motivation and encourages teachers to excel as professionals. Teachers' academic qualifications are improving. The number of entrants in post-graduate programmes in education has been increasing since 2003. Since the basic framework is now in place, the teacher licensing system needs to be improved and refined.

Extending Pre-Service Teacher Training Programmes

Traditionally, teacher training colleges located in all areas of the country provided training for many future teachers, particularly those residing in rural areas. The evolution of these colleges into comprehensive universities and their current reduced role in pre-service teacher training is described in Box B.

A major change in teacher development under the current education reform is the extension of pre-service teacher training programmes. To be a teacher in Thailand, an individual needs

to complete a five-year bachelor's degree in education, with four years coursework and a final year for a teaching practicum at an approved school. Alternatively, bachelor's degree graduates in fields other than education have to complete a one-year graduate certificate programme in education. The five-year pre-service teacher training programme began in 2004. In 2007 (academic year of 2006-7), the final cohort of four-year programme students graduated.

The goal of the five-year curriculum is to improve practical teaching abilities by requiring a one-year teaching practicum. Also, by increasing the credits in pedagogy and subject matter, the specialization of teachers is enhanced. Yet the duration of the programme is still being debated. The focus of the discussion is whether another year of education makes a substantial difference to teachers' professionalism. Some argue that there are alternative ways to improve professionalism, such as in-service training, instead of lengthening the duration of the pre-service curriculum.

There is also a concern that the longer duration and higher costs from the extra year of pre-service training may discourage young talented candidates from entering the profession. In fact, there has been a slight decrease in the number of entrants in faculties of education since the five-year programme started.

Box B: Evolution of Teacher Training Colleges into Rajabhat Universities

When Thailand was striving to achieve universal primary education in the 1960s and 1970s, teacher training colleges were established throughout the country, generally one in every other province. They provided both pre-service and in-service teacher training. Those with diplomas from these colleges were qualified to teach at both primary and secondary schools. There were two types of diplomas: one was a lower-certificate, equivalent to upper secondary education level, and the other was an upper-certificate, equivalent to an associate degree (two-year programme).

In the 1980s, with the universalization of primary education and dramatic declines in the birth rate, an oversupply of graduates became a concern so diploma programmes in education were closed and the teaching training colleges were transformed into Rajabhat Institutes. With a strong community orientation, Rajabhats have extended their roles beyond teacher training to provide other educational services to meet local needs. The Rajabhats have evolved into comprehensive higher education institutions and accordingly, obtained university status in 2004. Some are now offering doctoral degrees. The Rajabhats provide opportunities for higher education to those local communities whose citizens would otherwise lack access. Yet some argue that diversification of the degree offerings to fields such as business studies, seriously undermines the quality of teacher development.

Resources were shifted away from the faculties of education and enthusiasm and pressure to develop new faculties led to the neglect of the education programmes (Pillay, 2002). While standards vary significantly from institution to institution, there is a general consensus that there is a significant need for upgrading the Rajabhats and in particular the faculties of education. The qualifications of faculty are inadequate with only 20-30 percent having doctoral degrees. The Rajabhats were ranked either "fairly good" or "needing improvement" in the first-ever university ranking by OHEC in 2006.

Developing In-Service Teachers

With regard to in-service teachers, an award system was introduced to recognize outstanding teachers. ONEC and OEC selected 26 teachers for the National Teacher Awards from 1998 to 2006, for their innovation in improving teaching quality. The award consists of a salary supplement, a grant to pursue an innovative project and funds to integrate the innovations within the school. Furthermore, the Master Teachers Award recognized 586 teachers for their role as key agents of learning reform. Other agencies such as OBEC and TCT also reward outstanding teachers.

A series of training programmes are provided for in-service teachers. According to Teacher Watch, 92.6 percent of teachers attend training programmes three times a year. However, 91.7 percent of them are not trained in subjects they consider priorities. Teachers report serious problems with training programmes such as insufficient time, quality of lectures and applicability of what is presented.

While 87 percent of teachers favour workshops where knowledge can be applied, lectures focusing on theory are still prevalent. Also, 45 percent of teachers want follow-up courses, but training programmes are mostly one time only. Furthermore, 42 percent of teachers cannot fulfil their teaching assignments due to the need to attend training programmes.

The National Institute for Development of Teachers and Educational Personnel (NIDTEP) (formerly the Institute for Development of Educational Administrators) was established to take responsibility for in-service teacher development in 2005. The NIDTEP is expected to form policies, implement training programmes, develop systems and standards and coordinate relevant agencies for the in-service training. Yet progress has been slow. A national framework for training programmes has not been settled, but efforts to accommodate teachers' needs are being made. In fact, Teacher Watch was established as a platform for developing policies and strategies for improving the teaching profession for NIDTEP.

Along with the provision of training programmes, training of trainers is also being strengthened. The Rajabhat Universities have been major providers of both pre-service and in-service training. The MOE commissioned Rajabhat Universities to pursue research and development activities related to improving the quality of education in the various regions of Thailand.

Student Scholarships for Future Teachers

Providing student scholarships to those who enter the teaching profession is one of the measures to improve teacher quality. However, this strategy has been weakened due to budget cuts.

The government decided to change teacher education to a five-year programme and provide full scholarships in order to attract top high school graduates. In 2004, the government announced the full scholarship programme for at least three years. However, the government stopped this scholarship programme after one year.

Deans of faculties of education interviewed for this study, vary in their opinions of the impact on candidates on the five-year programme. But they agree that the full scholarships attracted many capable students and that there are "visible differences" between those who are receiving the scholarships and those who are not. While the regular students' average grade point average (GPA) is 2.5 on a 4.0 scale, the scholarship recipients maintained GPAs of 3.0 or higher, a condition to retain the scholarships.

To attract capable high school graduates, various scholarships are provided in addition to the full scholarships mentioned above. The IPST has been providing scholarships since 1996 to produce high calibre science and mathematics teachers. The programme aims to help 7,028 students graduate as teachers by 2010. These students earn a bachelor's degree at a faculty of science and then go on to a one-year graduate certificate programme at a faculty of education. The attitudes of the scholarship recipients towards the teaching profession and their ability to teach are high, according to an IPST evaluation (IPST, 2004). However, the duration of the full scholarships was reduced from five years to one year due to budget cuts. As mentioned earlier, Thailand is not attracting the brightest students into the faculties of education. Furthermore, the teacher shortages in mathematics and science are a critical problem. As one of the measures to address this issue, the provision of full scholarships to talented students should be pursued.

Section 5

Teacher Compensation

Improving teachers' compensation is essential to strengthening the teaching profession under the educational reforms. Appropriate compensation is a practical and strong incentive to attract and retain talented teachers. A new salary scheme was introduced in 2004. For the new scheme to work as expected, fair evaluation of teachers' performance is needed. Furthermore, the troubling high-level of teachers' debt needs to be urgently addressed.

5.1 Attractiveness of Teacher's Pay

Before the new salary scheme was introduced, teachers at public schools were paid at the same rate as all civil servants. The salary scale of Thai civil servants is low in comparison to other professionals with equivalent qualifications. For example, the salary for teachers with a bachelor's degree and five years experience was approximately 12,000 baht (USD$352)[8] per month. Engineers, web designers and business analysts earn twice as much as teachers. Accountants with professional certification earn three times more than teachers. Even receptionists with only diplomas can earn more than teachers (Kelly Services, 2006).

The average salary of a 40 year-old teacher is approximately 17,500 baht (US$514) per month. This is equivalent to an annual salary of US$6,168, which is 2.6 times the nation's GDP per person. This compares favourably with the average of Japan and South Korea (UIS, 2006*b*). However, in Thailand, all teachers receive similar salaries, irrespective of location. The annual teaching salary is less than the GDP per person in Bangkok, which is approximately USD$10,000, making the profession less attractive for Bangkok residents. On the other hand, the salary is approximately six times the GDP per person in the poorest area of Thailand, the Northeast. Therefore, the teaching profession is considered more attractive in the poorer areas of the country.

While the international trend is that secondary school teachers are paid higher than primary school teachers, both primary and secondary school teachers are in the same salary scheme in Thailand. Also, there is no difference in salaries among subject specialists.

8. The calculation of currency conversion in this Section is based on an exchange rate at US$ 1 = 34 baht.

Teachers, as civil servants receive other benefits. Medical assistance is significant since free medical assistance is provided at government hospitals for three generations (teacher's parents, spouse and children). Children's education assistance is also provided. However, transportation and housing assistance are rarely offered except in some special cases. Being a teacher and a civil servant also provides job security, as it practically guarantees lifetime employment. In Thailand, it is exceedingly rare that a civil servant is fired, except for reasons of criminal or seriously unethical behaviour.

Teachers' Debt

Thai teachers face tough financial pressures. Teachers are often discouraged because of low compensation for heavy workloads, not always related to teaching. Although teacher status may be declining, they still hold leadership roles in the community, especially in rural areas. Maintaining expected living standards (having a car and house, for example) can be costly.

Teachers' debt is a serious problem. According to the Teacher Civil Service and Educational Personnel Commission (TEPC) (2007), the number of teachers who registered as being in debt was 302,790, about 72 percent of the teaching force under TEPC in 2003. Although the number has decreased since 1996, the amount of debt grew significantly higher. The average amount of debt was 516,727 baht (USD$15,198) per person in 2003. The 41 to 50 age group comprised the greatest number of borrowers. Their debt is around 30 times more than their monthly income.

There are numerous reasons for teachers getting into such serious debt. It is understandable that buying a house, land or an automobile are major reasons, given their high price. However, it is astonishing to see that paying for living expenses is one of the common reasons of indebtedness, amounting to an average of 572,184 baht (USD$16,829) per person (TEPC, 2007). Also, education expenses for further study are costly. The opinions of those interviewed for this study vary. Some feel that teachers need to maintain a high living standard as a respected figure in the community (to be comparable for example with local wealthy business persons), while some criticize the lack of discipline among teachers who cannot manage their own finances. However, they all agree that teacher salaries are low.

One way for teachers to cope with such debt is to moonlight and obtain income from a second job. According to a Teacher Watch (2007) survey, the average salary of the respondents was 12,956 baht (USD$381) a month with 22.7 percent of them having income from a second source. The average amount from the second source is 1,665 baht (USD$49) a month, which is roughly 13 percent of their salary income.

The debt situation of Thai teachers is discouraging for teachers and for those considering teaching as a profession. The standards set by the Teachers Council of Thailand states that teachers are to be role models. Teachers are involved in community affairs and the majority live in the community where they teach: 37 percent of teachers live near their school and another 34 percent live in the same district (Teacher Watch, 2007). Community members, especially students, observe their teachers' heavy workloads and are aware of their poor financial situation. Teachers' salaries are public information and teachers' debt is a serious

social issue. Even though teachers are respected, if their life does not appear to be rewarding in children's eyes, the young may not be motivated to choose teaching as an occupation. The Thai government is initiating a 15 billion baht scheme to tackle the problem of teachers' debt and the new salary scheme is expected to ease the problem.

5.2 Establishing a New Salary Scheme

When the Teacher and Educational Personnel Act was passed in 2004, a new salary scheme was introduced. The scheme provides significantly higher teacher salaries (see Table 2). For example, under the new scheme, the salary range for a level 2 Teacher is 11,470 to 26,440 baht. Under the old scheme, the range was only 5,050 to 16,650 baht. Under the new scheme, there is a new level of specialized teacher who can earn up to 74,860 baht, which includes an extra allowance. Under the old system, the highest salary possible was 43,440 baht. Under the new system, extra allowances are also provided to those with superior performance.

Table 2: Comparison of Old and New Salary Schemes

Old Scheme (prior to 2004)		New Scheme (2004)		
Level	**Salary (baht)**	**Level**	**Salary (baht)**	**Extra allowance**
Teacher 1	4,230 ~ 13,550 ($124 ~ 399)	Assistant Teacher	8,360 ($246)	
Teacher 2	5,050 ~ 16,650 ($149 ~ 490)	Teacher	11,470 ~ 26,440 ($337 ~ 778)	
Instructor 1	6,210 ~ 20,340 ($183 ~ 598)			
Instructor 2	9,320 ~ 25,180 ($274 ~ 741)	Experienced Teacher	14,810 ~ 32,250 ($436 ~ 949)	3,500 ($103)
		Highly Experienced Teacher	18,180 ~ 45,620 ($535 ~ 1,342)	5,600 ($165)
Instructor 3	11,340 ~ 43,440 ($334 ~ 1,278)	Expert Teacher	22,330 ~ 48,600 ($657 ~ 1,430)	9,900 ($291)
		Specialized teacher	24,450 ~ 61,860 ($719 ~ 1,819)	13,000 ($382)

Note: Levels under the old and new schemes do not correspond exactly. Figures in baht at US dollars.

Source: TEPC (2007).

The new salary scheme is intended to be merit-based. Although the old scheme also considered teachers' performance, incentives are higher under the new scheme. A new category, specialized teacher, was added with significant extra allowances to reward and attract teachers with outstanding performance.

As teachers perform well and gain experience, compensation is significantly better with the new scheme. The total life income under the new scheme is 7,499,040 baht (USD$220,560) greater than that under the previous scheme. In other words, incentives for performance and for staying longer in the profession are much higher under the new salary scheme (Takayoshi, 2007; TEPC, 2007).

The new salary scheme hopes to retain experienced teachers and attract younger Thais into the profession. It is meant to provide a more attractive career path and pay significantly more than the old scheme. However, the new scheme could be improved to meet the needs of Thai education with even better incentives.

The Office of the Teacher Civil Service and Educational Personnel Commission approved the academic rank of about 4,500 teachers and educational personnel and allocated 9.2 billion baht (USD$270,588,235) for academic rank allowances.[9] Also, 33,000 teachers were promoted to higher positions in 2006. It is still too early to see the impact of the new salary scheme in attracting higher quality teacher candidates and retaining the current teaching force.

Evaluating Teacher's Performance

For the new salary scheme to function as expected, fair evaluation of teachers' performance is necessary. Currently, teachers are evaluated on three standards: (a) ethics and morality of profession; (b) quality of teaching performance and (c) academic performance such as research papers. The first two are evaluated by a three-person committee consisting of school principals and teachers at the local ESA. They need to be further approved by a sub-committee of the Teacher Civil Service and Educational Personnel Commission (TEPC) at the ESA. Then, the teacher submits the documents to demonstrate his/her academic performance to the ESA. TEPC's central office has a three-expert committee to review documents. If approved, the local ESA will promote the teacher to a new position.

The process is lengthy, going through two steps that include both the local ESAs and central TEPC office. Some interviewees commented that the amount of paperwork is overwhelming. In order to ensure the fairness, transparency and efficiency of the evaluation, the system needs to be closely monitored. Also, the link between the teacher licensing system and salary promotion should be clear. The paperwork should not be redundant, particularly in consideration of the teachers' heavy administrative work.

Heavy Workloads

The shortage of teachers indicates that there is more work for the current teaching force. Thai teachers' workloads are heavier than the average of OECD member countries, especially at the secondary school level. The average number of teaching hours of OECD countries is 19 hours,

9. Academic rank allowance is based on the quantity and quality of work performed by teachers. It is an addition to basic salary and will not be taken into account when calculating pension. The rates of academic rank allowance are shown in Table 2 as extra allowance.

while Thai teachers teach 29.5 hours at the lower secondary level (OEC, 2007*b*). The TEPC set the standard of 18 teaching hours a week at secondary school level. According to Teacher Watch (2007), Thai teachers at the basic education level teach up to four subjects 22 hours a week. Also, 36 percent of teachers teach multiple grades at the same time.

Furthermore, nearly half of teachers' time is spent on tasks other than teaching, such as administration and student supervision (OEC, 2007*a*). Teacher Watch (2007) reports that 46 percent of teachers spend 20 percent of their time on administration, which means that their administrative workload adversely affects their efforts to fulfil their teaching assignments. For example, 36 percent of teachers miss one lesson a week since they need to attend meetings, training and other school activities.

In conclusion, the new salary scheme is a major step to improve the attractiveness of the teaching profession, lessening the financial burden of teachers and rewarding teachers for merit and their specialism. However, additional support is needed to lower the burden of heavy workloads, hiring more administrative staff and teachers and finding ways to decrease out-of-field teaching. Finally, the heavy debt situation of teachers needs to be addressed.

Section 6

Conclusions and Policy Implications

Thailand has set clear policy goals to expand secondary education opportunities to reach all Thais and improve the performance of Thai students. While primary education is nearly universal, the country still faces quantitative challenges in secondary education. The National Millennium Goal of universal secondary education by 2015 will be difficult to achieve without concerted efforts, policy support and resource commitment. While expanding access to secondary education and narrowing regional disparities remain as challenges, there has been an increasing concern that Thai youths are not meeting national and international standards. Although multiple factors are involved in the students' poor academic performance, it has led to calls for better quality education and better prepared and qualified teachers.

This final section summarizes this study's conclusions, focusing on the teacher shortage issue and quality issue and provides recommendation for future action.

6.1 How to Deal with Teacher Shortage?

Thailand has a unique situation in which there is a shortage of teachers in schools and yet, simultaneously, there is a large pool of teacher candidates graduating from faculties of education. Some of the major reasons for this contradiction are the Thai government's downsizing policy and early retirement scheme, limitations in the personnel management system and absence of projection and coordination mechanisms.

The Thai government's downsizing policy should be reconsidered for teachers and the recruitment of new teachers should be promoted, or at least stabilized. The early retirement scheme has attracted nearly four times more teachers than those reaching retirement age, while new recruitment is very limited. In addition, the exodus of experienced teachers will continue as the teaching population is aging. With the recent cutbacks in recruitment, Thailand is at risk of having a significant lack of talented teachers for years to come, even if the government changes the policy now.

While Thailand continues to look for a solution to the issue of overall demand and supply, more attention should be given to the teacher shortage in the critical subjects of mathematics, science, IT and English at the secondary level. Teacher shortages in these subjects are serious even though the government places priority on improving student achievement in these

disciplines. Even if Thailand recruits more teachers to fill the demand, if their specialisms do not match the needs of schools, out-of-field teaching will persist and the quality of teaching cannot be assured.

Furthermore, the shortage is more serious in disadvantaged areas, rural and small schools. The disadvantaged areas do not have enough teachers and out-of-field teaching in critical subjects is common at small rural schools. The equity of access to quality education is a prolonged challenge to Thai education. The teacher shortage should be addressed urgently so it does not continue to be detrimental to delivering a quality education.

Complicating the shortage, the current personnel management system does not meet the needs of schools. While decentralization is being strengthened, the regulations for recruitment, posting and deployment should be further improved to meet the needs of schools. Teacher transfers should be considered on the basis of school needs in addition to the personal reasons of teachers. Simultaneously, a support system to increase the mobility of teachers needs to be developed. For example, monetary incentives should be considered for those who teach in disadvantaged and geographically remote areas.

To present clear guidelines for pre-service training and recruitment, Thailand needs to regularly project teacher demand based on consistent and reliable statistics. Currently, several departments and ministries keep their own figures, but consolidated statistics for the nation are necessary for appropriate pre-service training and effective recruitment and deployment of teachers. This requires one agency to take responsibility for collating information from all primary, secondary, private and vocational schools. Currently, faculties of education do not produce teacher candidates in the subjects Thailand needs. In sum, a coordinated system for projecting demand can lead to more targeted pre-service training, recruitment and deployment.

Temporary measures including out-of-field teaching, increasing workloads and hiring contract teachers are not sustainable. These approaches can lead to poor quality teaching by not having teachers teach their specialism and not allowing them enough time to prepare properly for courses. An increase in the number of contract teachers can have an adverse effect on the social and economic status of teachers and on the attractiveness of the teaching profession.

Thailand is taking positive steps to address this situation. The MOE has proposed to the cabinet an increase in the number of teachers as well institutionalization of supporting administrative staff. Provision of hardship pay was approved by the cabinet to those who teach in the deep South, a difficult geographical zone.

6.2 How to Improve Quality of Teachers?

Thai teachers are highly educated and dedicated to their profession. All teachers are certified with teacher licenses and their educational backgrounds are getting stronger. Yet the teacher shortage is affecting teaching quality. As mentioned earlier, heavy teaching loads are exacerbated by shouldering the workload of colleagues taking early retirement. In order

to appreciate their dedication, the environment to enhance teacher professionalism should be improved. Administrative support staff should be institutionalized so that teachers can concentrate on their profession. Currently, bigger schools and schools in more resourceful locations can hire support staff with their own budgets, but small rural schools face difficulties in doing so.

Whenever possible, Thai teachers should be allowed to teach their specialism. In other words, teachers should be provided a work environment in which they can concentrate on teaching. This will improve the quality of instruction in critical subjects. In addition, it will help promote career development and increase the morale of teachers.

Under the education reforms, a number of changes have been initiated to improve the quality of teachers. This, together with establishing the teacher licensing system, extending pre-service teacher training programmes and establishing a new salary scale, are strong steps in the right direction. But they are still at an initial stage requiring close monitoring and incremental improvements.

The new teacher licensing system encourages teacher development since it has to be renewed every five years. However, one of its shortcomings is that it allows teaching in all subjects and at all levels. At the secondary level, in addition to the basic license, teachers could be licensed in their specialization including mathematics, science, IT and foreign languages.

In addition, a fair and rigorous evaluation of the applicants' qualifications needs to be considered. In the first stage of implementing the licensing system, nearly all teachers were provided the license by meeting minimum requirements that included attending a broad range of training programmes. In order to strengthen in-service training programmes to provide continuous development of teachers, a structured approach that helps teachers improve their subject knowledge, teaching techniques and personal development should be established. Furthermore, the training should be taken in approved courses at approved institutions.

There is a need for a central coordinating agency among teacher-related organizations. Currently, the Office of National Education Standards and Quality Assurance (ONESQA), TEPC, OBEC and TCT have their own evaluation criteria for teachers, which are similar but not the same. Redundancy of paperwork only results in more work for teachers. Integrated evaluations can lead to stronger outcomes. While ONESQA's efforts are recognized, there is not much evidence that their outcomes have been utilized to improve teacher quality (OEC, 2005).

In order to attract and retain capable teachers, a new salary scheme is in place. It is merit-based and if teachers excel in their performance, they can earn significant increases in compensation. Yet, fair evaluation of teachers' performance needs attention. Furthermore, the system for certifying, training and rewarding teachers needs to work in tandem. In other words, the links between gaining a teacher's license, teacher development (CEU system) and promotion should be clear. Fair and transparent evaluation is important in order for the merit-based system to work as expected.

The new salary scheme should be closely monitored to see if it provides satisfactory compensation to maintain teachers' high social status in rural areas and increase their status in urban areas. The debt situation needs to be better understood and addressed. While many of the reasons for debt are linked to maintaining high social status, teachers must learn how to better manage their finances. Training in personal financial management is recommended for all pre-service and in-service teachers.

The pre-service teacher training programme has been extended to five years. It should be closely monitored to see if the longer duration is developing better quality graduates and attracting higher quality high school graduates to the profession.

The full scholarship programme should be reconsidered to attract highly capable high school graduates. While various measures to improve in-service teachers are in place, the measures to attract quality students at the initial stage are weak. If the scholarship recipients, bright and committed young people, are guaranteed jobs after graduation, the programme will assure the quality of the new and upcoming teaching force. The scholarship programme can be even more effective if it attracts candidates who excel in the key subjects of mathematics, science, IT and English.

The major obstacle in responding to these challenges relates to budget priorities. Although the Thai government allocates a reasonable amount of its national budget for education (consistently over 20 percent), secondary education receives only 26 percent of the total funding for education. (Many other nations allocate much more for secondary education.) Half of the Thai education budget goes for pre-primary and primary schools because of the tradition of having a school in all villages and having an excessive number of extremely small schools. Thailand with its 40 Rajabhat universities also has an overly large higher education sector which drains resources away from secondary education.

6.3 Future of Secondary Education and Teachers in Thailand

Thailand's policy to improve the status of the teaching profession is underway and many important steps, such as teacher licensing, evaluation of teachers, lengthening pre-service teacher training and increasing the compensation of teachers, should lead to quality improvements in teaching. However, these steps will not take full effect until the shortage of teachers and administrative staff is addressed. By ignoring both, Thailand risks a widening gap between urban areas and disadvantaged rural areas. Changes in policy will require additional resources and political leadership. In order for Thailand to strengthen the efforts of education reform, consensus building based on empirical research is also necessary.

As it has become a middle income country, Thailand faces new development challenges. It needs a well educated, trainable population. It is now difficult for Thailand to compete with Vietnam, Cambodia and Bangladesh in sectors dependent on low end cheap labour. Thailand also faces increasing competition from other rapidly developing Asian countries such as China, India and Malaysia.

Given such increased competition, Thailand must carefully examine the East Asian success model of growth with equity. Success in expanding and improving secondary education was a key to the economic success NICs such as Republic of Korea and Singapore. Thus, it is imperative that Thailand improve the quality and comprehensiveness of its secondary education system as articulated in its education reform policy and reflected in the NEA of 1999. This means that the improvement of secondary education and the teachers providing it must become a major national priority in the years ahead. This is essential if Thailand is to have the human resources needed for an increasingly knowledge-based economy.

Annex: List of Interviewees

No.	Name	Organization
1	Siriporn Boonyananta	Deputy Secretary-General, OEC, MOE
2	Somchai Chuchat	Dean, Faculty of Education, Srinakarinwirot University
3	Sajeewan Darbavasu	Lecturer, Faculty of Education, Suan Sunandha Rajabhat University
4	Precharn Dechsri	Assistant President, IPST
5	Horiuchi Tsutomu	Professor, Kyoto University of Education
6	Orawan Intavich	Head, DPST, PSMT, IPST
7	Aporn Jiamchaisri	Dean, Faculty of Education, Suan Sunandha Rajabhat University
8	Boonsri Keawsook	Principal, Wat Thawaratchkunchorn School
9	Vichien Ket-sing	OEC
10	Kedtida Kiewsa-ad	The Teachers Council of Thailand
11	Sunee Klainin	IPST
12	Maki Takayoshi	Graduate student, Faculty of Education, University of Hiroshima
13	Theeranattana Mesilp	The Teachers Council of Thailand
14	Kusalin Musikul	IPST
15	Banjalug Namfa	Director, Bureau of Innovation Development, OBEC. MOE
16	Boorapatis Ploysuwan	Dean, Faculty of Education, Phranakhon Si Ayutthaya Rajabhat University
17	Surin Pongsupasamit	President, The Institute for the Promotion of Teaching Science and Technology (IPST)
18	Srichai Pornprachatham	Teacher Civil Service Commission
19	Atchara Potiyawon	Lecturer, Faculty of Education, Suan Sunandha Rajabhat University
20	Wipada Prasansaph	Lecturer, Faculty of Education, Suan Sunandha Rajabhat University
21	Pattanida Puntumasen	OEC
22	Waraiporn Sangnapaboworn	Education Officer, OEC, MOE

No.	Name	Organization
23	Chaipreuk Sereerak	Director, Bureau of Policy and Planning, Office of the Basic Education Commission, MOE
24	Pruet Siribanpitak	Dean, Faculty of Education, Chulalongkorn University
25	Pinsuda Siridhrungsri	Chief, Education Policy and Macro Plan, OEC, MOE
26	Laddawan Songka	Supervisor, Office of English Language Institute, OBEC, MOE
27	Ausanee Thanabawan	Teachers Civil Service Commission
28	Prayad Thongmak	Head, PSMT Project, IPST
29	Suwit Tientong	President, Phranakhon Si Ayutthaya Rajabhat University
30	Sudhasinee Vajribul	Advisor, Education System, OEC
31	Pornpun Waitayangkoon	Vice President, IPST
32	Chakrapat Wata	Secretary-General, Teachers Council of Thailand
33	Sermsak Wisalaporn	President, Teachers Council of Thailand
34	Suthasri Wongsamarn	Director, Educational Policy and Planning Bureau, OEC

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