

Analysis of Vocational Education and Training

Thailand



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Thailand

General

Over 65 million people live in the kingdom of Thailand. Thai is the official language, besides English is spoken as a secondary language by the elite, there are ethnic and regional dialects. Over 95 % of the people is Buddhist, 4 % is Islam and the remaining people are Confucians and Christians (CIA, 2006).

Table: Age structure

0 – 14 year	23,9 %
15 – 64 year	68,6 %
65 year and over	7,5 %

CIA, estimation 2005

Economy

Thailand has a GDP per capita of 1.990 USD and a power purchase parity of 8.300 USD. In 2005, 1,4 % of the labour force of 35.360.000 was unemployed.

During the past two decades Thailand has undergone a rapid transformation from a predominantly agriculture-based society to an emerging industrial economy oriented towards manufacturing, services and external trade. During the 1990s, agriculture kept falling as a proportion of GDP, and manufacturing continued to increase, while becoming more sophisticated and diversified in terms of both products and technology. Family ownership and extended family business organizations have given way to a variety of corporate entities with organized labour forces, modern management systems, and increasingly sophisticated technological processes (World Bank, 1996).

	% of labour force	% of GDP
Agriculture	49 %	9,3 %
Industry	14 %	45,1 %
Trade and service	37 %	45,6 %

Source: CIA, 1998 and 2005

The main agricultural products are rice, cassava (tapioca), rubber, corn, sugarcane, coconut and soybeans.

The most important industrial sub sectors are tourism, textiles and garments, agricultural processing, beverages, tobacco, cement, light manufacturing such as jewelry, electric appliances and components, computers and parts, integrated circuits, furniture, plastics, automobiles and automotive parts, world's second-largest tungsten producer, and third-largest tin producer (CIA, 2006).

The rapid economic development of the country has brought about an increasing demand for well-trained skilled workers and technicians in all fields. Fuelled by private sector expansion, jobs are being restructured to accommodate new technologies, and there is a growing demand for employees with higher-level skills. This has become particularly critical in the manufacturing sector where employment has grown steadily over the past decade and where rapid expansion is expected to continue. The vocational and technical education (VTE) system, which trains skilled workers and technicians, is attempting to adjust its efforts to changing demand in the labour market. It brings to this task both strengths and weaknesses (See last paragraph).

On the one hand, exposure to competition and growing labour shortages will lead to increased capital investment and automation, tending to reduce demand for skilled labour. On the other hand, the expansion of industry, growth in skill intensive small and medium enterprises and the expansion of infrastructure investment will increase demand. The efficiency of VTE institutions will be increasingly determined by their ability to identify and react quickly to these changes in the profile of skill demands. Adjustment of the vocational education system, especially through upgrading skills of technical teachers, is therefore needed to improve quality and flexibility in responding to changing employment demand (World Bank, 1996).

Education

In 2002 92,6 % of the population was literate, 94,9 % of the male population and 90,5 % of the females (CIA, 2006).

Education is classified into three types: formal, nonformal and informal education.

Formal education

Formal education specifies the aims, methods, curricula, duration, assessment and evaluation conditional to its completion.

It is divided into two levels, basic education and higher education, with services provided by both public and private bodies.

Basic education

Basic education covers two years of pre primary, 6 years of primary, 3 years of lower secondary and 3 years of upper Secondary education. As of May 2004, Thailand extended the provision of free basic education from 12 to 14 years, to include 2 years of pre primary. Educational institutes at this level are more decentralised in terms of administration and management according to the 1999 National Education act (Ministry of Education, 2004a).

Higher education

Higher education is provided at universities, institutes, colleges (and other types of specialised institution). It is divided into two levels: lower than degree level and degree level. Lower than degree level Lower than degree level, or diploma level, is mainly offered by colleges and institutes, public and private vocational colleges, as well as colleges of physical education, dramatic arts and fine arts. The majority of the courses offered are associated with vocational and teacher education and require two years of study.

Degree level

Degree level studies take two years of study for students who have already completed diploma courses and four to six years of study for students finishing upper secondary education or equivalent courses. The first professional qualification is a Bachelors degree.

Most bachelor degrees take 4 years of study, however some fields of study, as medicine, dentistry and veterinary sciences take 6 years of study.

Formal education covers both special needs and welfare education and vocational education. Vocational education forms part of the general stream of basic education. Career and technology related to education is offered to schoolchildren at both primary and secondary levels to provide them with work experience and assist them in career preparation and application of technology. Formal technical and vocational education is provided at three levels:

- Upper secondary leading to the lower certificate of vocational education
- Post secondary leading to a diploma or other higher certificate
- University level leading to a degree

In addition, there is special vocational education, which includes sports schools providing full scholarships to particularly talented students. It also includes dramatic arts and fine arts colleges offering certificates equivalent to lower and upper secondary education (Ministry of Education, 2004a).

Non formal education

Non formal education has more flexibility than formal education in determining the aims, modalities, management procedures, duration assessment and evaluation conditional to its completion. The contents and curricula can be adjusted to meet the needs of individual groups of learners. There are 5 types of non formal education in Thailand provided by both public and private agencies and institutes, outside the school system. Pre-school (2 – 6 years), education for literacy, general non formal education, vocational non formal education and quality of life improvement activities.

The vocational non formal education is offered through polytechnics, industrial and community colleges under the supervision of the Office of the Vocational Education Commission; the bureau of the non formal education the Ministry of Industry, the Ministry of Agriculture and Cooperatives, as well as the Ministry of Labour through regional institutions and provincial skills training centres under the supervision of the Department of Skills Development (Ministry of Education, 2004a).

Non formal education and skills training can be divided into

- Training courses for vocational certificate are designed for primary graduates who have no chance to study at a higher level. It aims to provide opportunities for training in vocational skills and quality of life promotion to target population in rural areas and leads to a certificate equivalent to lower secondary school.
- Short courses in vocational training are provided by both public and private institutions and agencies. Courses are offered from up to three hours to one year depending on the content and the objectives. Pre employment training and training to upgrade skills are offered by educational institutions as well as related agencies. At present short course vocational training is designed with self employment in mind and articulates with formal programmes in order to serve life long learning needs.
- Interest group programmes are organised according to the individual needs and interests of the general public. Those having the same interest can form a group of 5 – 15 persons and receive training up to 30 hours.
- Certificate in vocational education – non formal activities are provided for lower secondary graduates through distance learning. Both the unemployed and those working in public organisations and private enterprises are targeted. This programme requires at least three years of study except when there is a transfer of academic performance or experience.

(Ministry of Education, 2004a)

Informal education

Informal education enables learners to learn by themselves according to their individual interests, potential, readiness and opportunities available through individuals, society, environment, media and other sources of knowledge. For example, informal programmes may be provided by libraries, museums, science and technology centres, and through mass media such as radio, television, newspapers, and magazines. In addition, community learning networks offer programmes at community learning centres, village reading centres, sub district health offices, sub district agricultural offices and natural learning sources in each community. The informal learning that takes place through the transmission of local wisdom, using local media, in families and via cooperative networks should not be ignored either. Further more homeschool is also encouraged to involve parents' role in providing basic education according to the 1999 National Education Act. The government has yet to come up with guidelines and other related documents to support homes and ensure the standards (Ministry of Education, 2004a).

The overall macroeconomic environment during the past few decades has, in general, been favourable for educational development. Rapid growth and structural change in the economy have led to inevitable adjustments in the education and training system. The need for an educated population as the basis for development together with a strong commitment to equity goals have led to universal access to primary education, with high completion rates, as well as to effective nonformal programs to increase adult literacy. In principle there is an upper secondary place for each graduate of lower secondary education, half of which are in vocational schools and colleges (World Bank, 1996).

Table: enrolment rates in basic education, 2003

Level of education	
Pre primary	85
Primary	104,4
Lower secondary	84,6
General Upper secondary	37,5
Vocational upper secondary	21,5

Source: Ministry of education, 2004a

Adult literacy rate, 2000-2004*, male	95
Adult literacy rate, 2000-2004*, female	91
Primary school enrolment ratio (2000-2004*), gross, male	99
Primary school enrolment ratio (2000-2004*), gross, female	95
Primary school enrolment ratio (2000-2004*), net, male	87
Primary school enrolment ratio (2000-2004*), net, female	84
% of primary school entrants reaching grade 5, Admin. Data, 2000-2004*	-
% of primary school entrants reaching grade 5, Survey data, 1997-2004*	-
Secondary school enrolment ratio (2000-2004*), gross, male	77
Secondary school enrolment ratio (2000-2004*), gross, female	77
Secondary school enrolment ratio (2000-2004*), net, male	-
Secondary school enrolment ratio (2000-2004*), net, female	-

Unicef, 2006

Technical and Vocational Education and Training

How is VET defined? Formal, informal and non formal? Does it include training on the job? Which ones have priority in governmental practices and policy? How successful are they?	" a comprehensive term referring to those aspects of educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of
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	economic and social life. It applies to all forms of technical and vocational education provided in educational institutions or through cooperative programs organized jointly by educational institutions at one hand, and industrial, agricultural, commercial and any other undertaking related to the world of work, on the other.”
Gender ratio in VET on national level, regional differences	MOE has a clear policy of gender equity in access to VTE institutions. Enrolment of women in vocational education, although lagging somewhat behind men, has shown marked signs of improvement in recent years. Women represented 50% of total enrolments in 1994-95. For RIT, the female enrolment trends have been steadily increasing at all levels since 1988 (Annex 3). The majority of female students in DOVE institutions are enrolled in areas of commerce/business administration (90% of total enrolment in this field), and home economics (97% of total enrolment). No discriminatory practices exist which would discourage women from enrolling in trade and industry courses and the present enrolment pattern is largely the result of the exercise of individual preferences.
Which institutions pay attention to VET?	It is delivered through both public and private vocational colleges, and provides almost as many places for lower secondary graduates, as do the public and private general secondary schools.
In which regions are they active, share urban / rural?	

Vocational and technical education is a major component of Thailand's education system. It is delivered through both public and private vocational colleges, and provides almost as many places for lower secondary graduates, as do the public and private general secondary schools. In 1995, it consumed 9% of the national education budget. As industrialization accelerates, the VTE system is being called upon to play a more critical role in the preparation of better-trained craftsmen and technicians, which form the base of the technical skills pyramid (World Bank, 1996).

The structure of the vocational and technical education system is relatively complex, comprising both public and private institutions. The public network is administered by several ministries, some of which offer both formal and nonformal training. The Ministry of Education (MOE) plays the major role in this effort. Within the MOE, the Department of Vocational Education (DOVE) and the Rajamangala Institute of Technology (RIT) enrol approximately 60% of all vocational and technical students (World Bank, 1996).

Secondary (certificate) and post-secondary (diploma) vocational education is provided in technical, commercial and agricultural fields by the King Mongkut's Institute of Technology (KMIT) under the Ministry of University Affairs, and by the RIT and DOVE under the MOE. Private vocational schools also provide both certificate and diploma programs in agriculture, commerce and industrial fields. These schools may follow either the DOVE or RIT curriculum. Most formal institutions, both public and private, offer programs at more than one level; for example, for both the certificate and the diploma, or in the case of some of the campuses of the RIT, at the certificate, diploma and degree levels. In 1994, DOVE and RIT institutions enrolled about 406,008 students in certificate, diploma and degree programs. Admission at all levels is through competitive entrance examinations developed and administered by each individual institution (World Bank, 1996).

Nonformal training is offered by the MOE through DOVE's 46 polytechnics and 54 industrial and community colleges and by the Department of Nonformal Education (DNFE) through its

6,500 institutional/training groups. It is also offered by the Ministry of Labour and Social Welfare through the Department of Skill Development's (DSD) ten regional institutes and nine provincial skill training centres. The latter training is generally targeted at more disadvantaged workers, with a duration ranging from 10 hours to 15 months (World Bank, 1996).

Number of educational institutions 2003	Total	Public	Private
Whole kingdom	92939	87.104	5835
Pre primary	44.760	42.075	2.685
Primary	33.043	31426	1617
Lower Secondary	10.490	9903	587
Upper general secondary	2.837	2.666	171
Upper vocational secondary	889	540	349
Below bachelors degree	646	324	322
Bachelors degree	208	131	77
Post graduate	66	39	27

Source Ministry of education 2004a

Student teacher ratio 2003

Pre primary	1:20
Primary	1:19
Lower secondary	1:21
Upper general secondary	1:21
Upper vocational secondary	1:31

Source Ministry of education 2004a

Table: number of graduates and students in 2003 by level of education

Level of education	Graduates				Students			
	2000	2001	2002	2003	2000	2001	2002	2003
Certificate level	99.390	85.609	86.702	NA	404.296	395.199	406.067	392.246
Diploma level	65.908	76.865	72.676	NA	188.605	196.541	189.097	187.057
Higher diploma in technical education	0	164	485	NA	233	1017	1545	964
Total	165.298	162.638	159.863	NA	593.044	592.757	596.709	571.267

Ministry of education, 2004a

The curricula of DOVE and RIT are centrally developed. The process of modifying such centrally determined curricula to reflect changes in the demand for skills in the labour market is bureaucratic and time consuming. RIT curricula are developed by committees of teachers, subject matter experts and curriculum specialists. Despite the demand for practically-trained technical VTE graduates, the DOVE curriculum continues to allow students to take a broad range of general subjects with little occupation-specific technical training. In theory, DOVE colleges have the right to develop courses locally within the framework of electives. These have to be approved by DOVE. It is reported that most DOVE institutions prefer to use the central curriculum because of limited time and technical expertise for curriculum development (World Bank, 1996).

The general nature of the training combined with the system-wide inflexibility in implementing curriculum changes responsive to the economic environment were major factors leading to past overproduction of graduates in some areas and shortages in others. In the late 1980s, there was an over-supply of graduates in commerce as DOVE and RIT institutions offered such courses under similar curricula. At the same time, shortages of graduates existed in

areas of industrial technology where the intakes of existing institutions were too small and could not be expanded in a timely manner (World Bank, 1996).

Instructional materials development is provided primarily by the teachers of the subjects. The development of instructional media and materials is done through an Instructional Materials Development Centre that is attached to the RIT Registrar's Office. These materials generally support the core courses and new curricula that are formally introduced. Additional audio-visual and written instructional materials are produced by the instructor within their own institutions. Most institutions have some capacity for teachers to produce their own audio-visual instructional aides and materials. Teachers have complained that they do not have time to prepare their own materials, but the VTE administrations of both DOVE and RIT are convinced that teachers should take a major responsibility for their own instructional materials development. The MOE offers a course on the development of instructional materials that all instructional staff are encouraged to take. It has been estimated that more than 60% of all VTE teachers in DOVE and RIT have been trained to prepare their own instructional materials. Over the next five years, there will be a need to upgrade curricula and develop more instructional materials for the higher-level technologies being introduced by RMT (World Bank, 1996).

Policy and organisation of VET

Thailand has prepared a long-term education plan, the National Education Development Plan for 2002-2017, a medium-term plan, the 9th National Education Plan for 2002-2007 and a short-term plan, the Annual Budget Plan by the Ministry of Education (still on-going).

The Office of Vocational Education Commission is the main organisation responsible for technical and vocational training in Thailand. The commission embraces administration and management of vocational education at two levels: 1) national level, comprised with representatives from the private sector, as well as with concerned agencies, is responsible for formulating long term planning, and other major policies relating to VET in Thailand. 2) Institutional level, 412 colleges under the commission are merged into 28 multi campus vocational institutes aiming at developing a strong partnership with the private sector, remobilizing resources, developing demand driven programmes in line with local needs, identifying and strengthening areas of excellence in each institute; developing multi disciplinary programmes. Each institute absorbs about 10 – 15 colleges spanning 2 – 3 provinces. Reorganisation is expected to increase institutional autonomy, accountability, and consistency in meeting educational standards (Ministry of Education, 2004a).

Department of Vocational Education Institutions

DOVE, under the Ministry of Education, is the largest public provider of vocational and technical education, with 277 vocational and technical schools/colleges under its jurisdiction. It administers secondary (certificate) and post-secondary (diploma) level programs in three fields (technical, commercial and agriculture) within the technical and vocational training colleges. In 1994, an additional 10 new colleges were under construction. DOVE institutions enrol approximately half of the total number of students enrolled in vocational schools at the secondary level. A system of 100 polytechnics and industrial and community colleges (ICCs) provide mainly short-course training to entry-level workers and for upgrading the basic skills of existing workers (about 112,000 in 1994) and more formal training to upgrade qualifications to the certificate level (about 12,500 in 1994) (World Bank, 1996).

King Mongkut's Institute of Technology

KMIT was established in 1971 as a science and technology institute, under the Ministry of University Affairs. It provides a third institutional stream for certificate (5%), diploma (7%), and degree (88%) studies in industrial technology. Both KMIT and DOVE are conducting pilot experiments with the "dual training system." While the approaches vary in detail, the

pilots have in common a combination of on-the-job training of employed workers with one- or two- day block release periods per week for theoretical classroom training. The KMIT pilot is being done in collaboration with a large auto assembler and also assisted by German aid; the DOVE project serves a number of employers in provincial industrial areas (World Bank, 1996).

Private Vocational Schools

Private vocational schools and colleges provide an important flow of graduates at both certificate and diploma levels in agriculture, commerce and some industrial fields. Private schools are registered with the Government, which sets limits on the amount of tuition they can charge. Tuition ceilings have made it difficult for private schools to offer relatively expensive industrial subjects, although some do. It is in commerce that private vocational schools outnumber public institutions because of the lower investment cost required and the continuous successful placement rates of their graduates. In 1994, private schools enrolled 50% of the students at the certificate level, and 40% at the diploma level (World Bank, 1996).

Rajamangala Institute of Technology

RIT is the other main vocational training department operating under the Ministry of Education. Established in 1975, it administers eleven faculties in different disciplines, offering certificate and diploma courses in varying combinations at 31 campuses (12 urban and 19 rural) located throughout the Kingdom. At present, the RIT employs about 7,500 permanent staff, of which less than 10% are classified as administrative officers. Since 1981 four-year bachelor degree programs in engineering, agriculture and business administration have been offered at ten campuses in response to growing needs for higher-level technical manpower. This program is equivalent to a university degree. However, credits earned in RIT or DOVE diploma programs are not accepted in the universities, restricting vocational students to the degree programs of RIT and the KMIT, or to the Open University, which accepts diploma credits in some programs. In 1994, the RIT enrolled about 72,000 students and all campuses are able to maximize their enrolments every semester. Student dropouts are generally low and few students repeat programs. Placement rates for the RIT are quite high, although variable. The rates range from about 80% to about 95%. In 1995, it is expected that RIT will graduate about 6,000 persons from certificate programs, 15,000 with diplomas, and about 4,000 with degrees.

About 67% of RIT technical teachers have a B.S., 28% have masters degrees, 1% have Ph.D.s and less 4% have less than B.S. degrees. Most of these teachers have limited or no industrial experience. Over the years, through in-service training and preservice education, many have been trained in pedagogy including instructional methods, curriculum development and instructional materials development. To upgrade the teaching force, RIT has an active program under which foreign teachers are invited to teach and conduct research and to share their expertise with RIT staff. During the past five years, RIT has had 20 to 30 foreign teachers/researchers in residence each year. To further complement this effort, RIT staff are sent for short and long-term training both local and overseas: 30 annually for short term and 15 annually for long-term. RIT's overall student/teacher ratios range from 15 to 1 to 20 to 1 (World Bank, 1996).

The Government's policies in VTE reflect the need to address the basic issue of widespread skill shortages in the labour market as well as to improve the quality of training and strengthen internal management of the VTE system. The Seventh Plan¹ calls for a substantial increase in the supply of technicians through the expansion of institutional capacity. This would result in a three-fold increase in total outputs from 200,000 during the Sixth Plan to 600,000 during the Seventh. However, one of the major constraints to achieving this target is the shortage of technical teachers, resulting from the demand for personnel with technical skills in industry. This problem has been approached by developing a special

¹ Currently, the 9th Plan is in use, but the full text of this Plan is not available on the internet

teacher-training course for vocational certificate holders accompanied by scholarships for selected students. This policy aims at increasing the supply of qualified teachers but attention needs to be given to incentives to ensure their retention within the VTE system (World Bank, 1996).

There is recognition in the Seventh Plan of the need to provide skill training for the economically underprivileged in order to raise their incomes and promote self-employment. This will be achieved through an expansion of formal and nonformal lower level skill training. An important part of this strategy is to strengthen the system of 100 polytechnics and ICCs which provide entry-level training and programs for skill upgrading. Trainees in the system are drawn heavily from the lower socio-economic groups. It is planned to expand the system through the establishment of 25 new polytechnics/ICCs, but the immediate priority is to improve the quality and relevance of training and to develop more effective management of the system (World Bank, 1996).

Financing

The public vocational education system is largely financed by public revenues. 80 % of the costs of vocational schooling are provided by government budgets. The remaining 20 % is supported by tuition and fees paid by students and their families. The fees, ranging from B50 (ca 1 euro) to B80 (ca. 1,7 euro) per credit for certificates and diplomas, are the same regardless of the field of study, and thus represent varying portions of total unit cost for different courses. In addition to official tuition, students and parents are often required to make additional contributions to schools, usually as a condition of enrolment. These contributions are not reported in official statistics, but can add twenty percent or more to individual direct costs at the secondary level. Limited scholarships are available to needy students. Scholarship funds are raised by headmasters through donations from local businesses. To provide further financial assistance to lower-income families, the Government has recently introduced a B 10 billion (214 million euro) loan program. The interest rate is 3% and repayments will be made through an additional income tax which is deferred until the borrower has obtained employment. To qualify for the loans, annual family income must not exceed B 100,000 (2140 euro) (World Bank, 1996).

During 1992-1995, total expenditures for vocational education and training averaged nearly 9% of total MOE budget and within this share, DOVE and RIT resources grew steadily. The estimated average unit cost per student is expected to increase by about B2,000 (ca 43 euro) per year throughout the Seventh Plan. Tuition fees can be levied by vocational institutions but there is no specific rate set by the Ministry of Finance. However, fees charged by these institutions should be similar to the amount charged by academic upper secondary schools (World Bank, 1996).

The MOE classifies private vocational schools according to their financial standing: subsidized and non-subsidized. For private schools with a sound financial position, no subsidy is given and MOE does not control the level of school fees. However, the tuition fee charged by these schools should not exceed B3,900 (83 euro) per annum for lower secondary and B4,300 (92 euro) per annum for upper secondary.

For private subsidized vocational schools, the tuition fees should not exceed B2,340 (50 euro) per annum for the lower secondary level and B2,580 (55 euro) per annum for the upper secondary level.

There are two types of subsidized schools: (a) those receiving 60% of the cost per head; and (b) those receiving 40% of the cost per head. Currently, the latter type predominates. Private vocational schools which receive 60% are usually connected with charitable or religious foundations, whereas the 40% subsidized group are proprietary schools. A survey conducted by the National Education Commission in 1986 found that approximately 75% of all private schools in the country received subsidies, which averaged B350,000-B380,000 annually (almost 7500 euro – 8134 euro). In the Bangkok metropolitan region, about 55% of

the private vocational schools received subsidies, averaging around B 170,000 (3640 euro) per annum (World Bank, 1996).

The main goals on VET in national policy

A few of the aims in the strategic action plan are to
“.. strengthen Vocational Education by creating and promoting appreciation of the value of professional education on an extensive scale and continual basis by encouraging and supporting the private sector to invest in the provision of vocational education.” and
“..Supporting educational provision at Bachelors degree level in technological or vocational field” (Ministry of Education, 2004a).

In the Strategic Action Plan of the Ministry of Education is strengthening of vocational education one the aims. This should be done by:

- Creating and promoting appreciation of values of professional education
- Creating career path for vocational graduates and providing guarantee for employment;
- Educational guidance for career path;
- Public campaign for changing attitude towards professional education;
- Promoting and developing modern professions (e.g. 5 categories of food production, automobile, tourism, jewelry, and software);
- Transfer of experience and strengthening of qualifications acquisition for all target groups;
- Availing of local wisdom in vocational education development;
- Strengthening links between basic, vocational and higher education systems; and
- Creating occupations and providing supplementary jobs to solve social problems of poverty/ unemployment/disability.
- Provision and expansion of opportunities for professional education on a wide scale and on a continuous basis
- Providing lower and higher vocational education certificate courses (workplace learning);
- Organizing short courses, training and professional development (Projects 9+1, 12+1, Sufficiency Economy); and
- Organizing a dual education system (school/factory).

Encouraging and supporting the private sector to invest in vocational education

- Expanding dual vocational education system;
- Encouraging the private sector to expand its vocational education services;
- Strengthening existing vocational education provided by the private sector;
- Streamlining legislations, rules and regulations to facilitate educational investment by the private sector;
- Strengthening educational networks run by the private sector; and
- Encouraging cross-institutional registration by students.

Ministry of education, 2004

Recently there are some job placement companies from Korea, Singapore set up their own Training centres to select and develop unskilled Thai labour into skilled labour. Most of public vocational school have been started more than 5 years (Questionnaire partner, 2006)

Relation government and trade and industry (private) companies and private initiatives in VET

Linkages with industry are often weak and job information and placement services need strengthening. In addition to centralized curriculum development, the system has not established the types of linkages with employers that facilitate the flow of labor market information which informs enrollment and curriculum planning. The national Joint Public/Private Committee (JPPC), established in 1985 to enhance participation of the private sector in vocational education, is chaired by the Prime Minister and includes in its membership high ranking ministry officials and representatives of the Thai Banking Association, the Thai Chamber of Commerce and the Thai Industrial Association. However, the high status of committee members is reported to make operation of the JPPC ineffective. The committee has had little impact on the operation of the training system. (World Bank, 1996)

The Seventh Plan calls for much closer cooperation between employers and training institutions to ensure greater relevance of training to labour market needs. This is an area where more effort needs to be made especially in making the overall policy bodywork and in improving the facilitation of student on-the-job internships. The latter is difficult in Thailand where small- and medium-scale firms predominate. Thus, more attention needs to be given to providing the necessary incentives to employers to take on trainees.

The Government is also concerned that adequate resources be available to finance the planned expansion of the VTE system. This includes an increased role for the private sector. The Plan calls for the removal of ceilings on tuition charges in private schools to increase the financial viability of existing schools and to encourage new entrants to the market. This is especially important in the VTE sector where entry costs are high. Private schools will also be allowed more freedom in the teaching of curricula and will be allowed more flexibility in management and administration. A major new incentive was announced recently by the Government in the form of a B20 billion (almost 428 million euros) fund which will allow educational entrepreneurs in the provinces to borrow up to 50% of the development costs of new schools at subsidized interest rates (World Bank, 1996).

DOVE and RIT curriculum policy requires students to do on-the-job internships. However, the principal responsibility for finding internships rests with students. Securing internship placements is difficult in a market where many firms are small. School personnel get involved only if a student is unable to find an internship place. The problems of establishing linkages of any kind with small firms are persistent. This may be a factor in explaining the relatively low levels of enterprise participation in teaching and curriculum development. In the latter case, of course, there is little school-level curriculum development to which employers might contribute (World Bank, 1996).

Both DOVE and RIT have established job information and placement services for their students. DOVE has also taken steps to encourage linkage development, but success has been hampered again by the prevalence of small firms and by the inability of individual institutions to adjust their curricula to changing employment and training needs. Furthermore, DOVE and RIT policies encourage the formation of local school advisory committees. These committees have been difficult to establish, and have not been very effective in DOVE schools. They appear to function better for urban schools (both public and private) near large enterprises. Generally, there are few incentives for enterprises or schools to invest much time or energy in linkage development (World Bank, 1996).

Mechanisms to translate vocational education and training plans and priorities into action at the institutional level are lacking. The practice of using labor market information as the basis for broad decisions on training priorities and resource allocations need to be established in close coordination with various national planning agencies such as NESDB and research centers such as TDRI (World Bank, 1996).

International donors / INGOs involved in VET

UN, World Vision, Christian Organization such as ZOA, CAMA, Southern Baptist, AMG International (Questionnaire partner, 2006), World Bank, PADECO.

Networks around VET

There are Public-private networks, including companies and VTCs. They operate on regional and provincial level. These networks organise VET, they are mobilising the sector to cooperate in (T)VET, they are expanding the idea of (T)VET and give training. The relationship of these networks with

- international NGOs / donors, consists of visiting instructors, job vacancies and financial support.
- the government in (financially) supporting the sector
- the trade and industry sector in helping to accept VET graduates to work in factories.
- Chambers of Commerce in case if job vacancies concerned with the members

(Questionnaire partner, 2006)

Education of teachers

Currently, there are about 25,000 technical and vocational teachers in the public formal VTE system. Technical teacher training programs are offered by both RIT and KMIT, which have a combined annual output of approximately 1,000. The program includes one-year pedagogical courses after the technical diploma, and four-year courses leading to a bachelor's degree in industrial education. Graduates are targeted to fill vacancies in public and private VTE institutions. While the present staff turnover rate in the institutions is low (less than 2%), it has become extremely difficult to recruit new teachers for existing vacancies and to staff new vacancies where the VTE systems are being significantly expanded. This is due to the high level of demand in a rapidly expanding economy for highly-skilled, technically qualified graduates which are attracted to industry by relatively high salaries. To partially address this problem, DOVE initiated at one of its technical colleges in 1990, a two-year technical teacher program for students with a diploma in vocational education. The program was later expanded to include eight other DOVE colleges in various parts of the country. Competitive entrance examinations are required and, upon completion, students are awarded a bachelor of technology degree. Scholarships are available for selected students at B30,000 per scholarship. These graduates are bonded to teach in DOVE institutions for four years (World Bank, 1996).

Established in 1989, under the administration of DOVE, the Staff Development Institute (SDI) is responsible for the in-service training of DOVE personnel. SDI courses are short-term and subjects offered are limited. In 1995, SDI trained about 2,885 teaching staff or about 17% of all DOVE VTE teaching personnel (estimated at about 17,000 in 1995). An OECF project is currently assisting SDI in the development of longer and more intensive training courses in advanced technology. Equipment, civil works (five buildings), foreign consultants, English language training, and teaching scholarships are being provided by OECF (World Bank, 1996).

Trainers are skilled teachers and labourers (Questionnaire New Vision Foundation, feb 2006)

With the rapid expansion of VTE enrolments, the inability of institutions to recruit sufficient numbers of fully qualified VTE teachers is become increasingly serious, especially in the fields of electrical power, electronics, mechanics, and computer science where many teachers qualified in these fields are reluctant to enter the teaching profession due to the availability of higher salaries in private industry. In some of these industrial/commercial fields, salaries may be two to three times higher than those paid for VTE teachers. Although

teacher turnover is low, the shortages of highly qualified technical teachers appear to be worsening as most VTE systems in the nation expand in capacity and into higher technology program offerings. DOVE's estimate of the annual demand for new VTE teachers exceeds 2,000 for technical teachers, 1,000 for commercial teachers, and 800 for agricultural teachers. For those remaining in the teaching force, many carry a heavy workload - ranging from 40 to 60 hours per week. Given the marked differences in the salaries paid by industry/commerce relative to the public sector, there is a need to consider incentives to attract VTE teachers and the training of larger numbers to help reduce the teacher shortfall experienced within the various institutions (World Bank, 1996).

Over the years the educational qualifications of vocational and technical education teachers have improved as a result of continuing government commitment to strengthening VTE and an effective teacher training system. Within the RIT, only 4% of teachers are diploma graduates and this is in line with the effort to increase recruitment of staff with masters degrees to reflect the academic requirements for teaching the bachelor degree courses offered on RIT campuses. Skill upgrading is urgently needed in the RIT to enable teachers to effectively teach new technologies. These teachers also need to have more opportunities to acquire industrial experience and to upgrade their academic credentials (World Bank, 1996).

VET specialisations

For girls: medical assistance, homemaking, sewing, handicraft

For boys: gardening, handicrafts

(Questionnaire New Vision Foundation, feb 2006)

Strengths and weaknesses

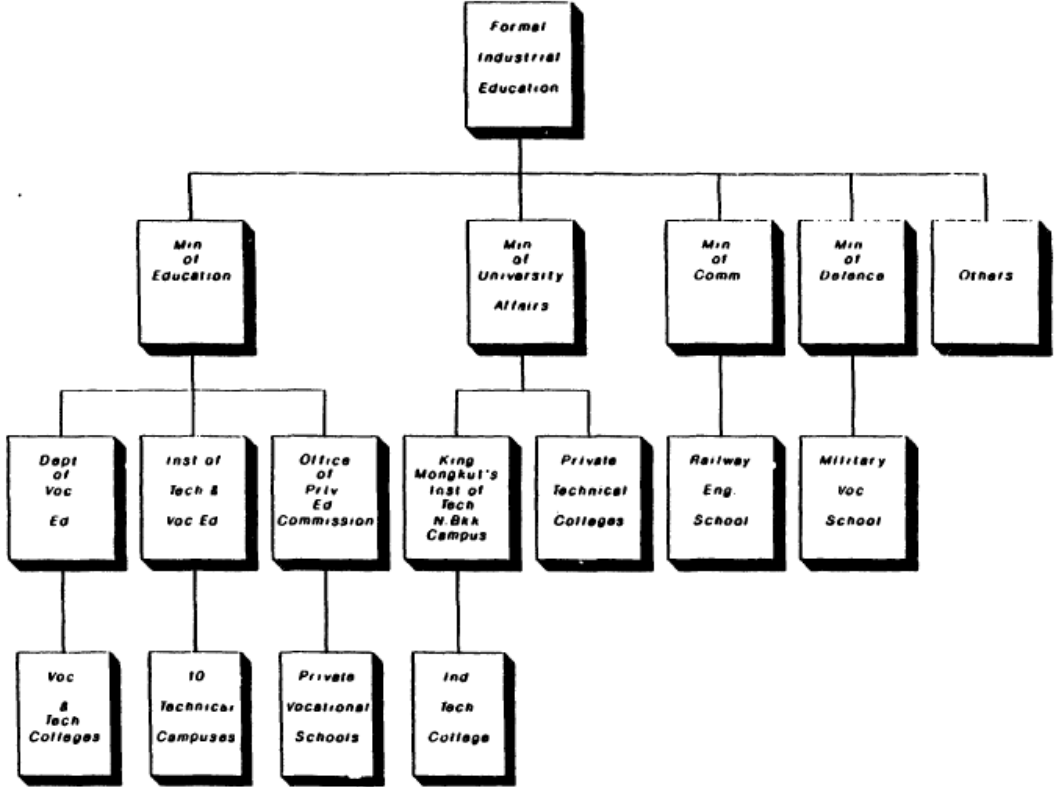
Strengths	Weaknesses
The development of the VTE system in the course of the past two decades has been a remarkable achievement. (World Bank, 1996)	In the medium term, the overall size of the system and its ability to respond efficiently to the needs of a changing economy are sources of concern. The current directions of the Thai economy indicate the presence of offsetting trends in the demand for skilled workers and technicians. There continues to be a need to upgrade VTE curricula to meet the changing skill demands. Individual institutions also need greater flexibility to adjust curricula to local skill needs.
The system's strengths include a high level of commitment and professionalism among administrators, teachers and staff (World Bank, 1996).	Measures are needed to address the following issues: outdated equipment and facilities, rigid curriculum, absence of strong linkages with industry, and lack of system-wide planning and coordination (World Bank, 1996).
There is high internal efficiency (World Bank, 1996).	A substantial proportion of the medium technology equipment is obsolete and suffers from years of hard use by students and less than adequate maintenance. This severely limits the quality and level of instructional programs offered (World Bank, 1996).
good completion rates (85-95%) (World Bank, 1996).	The lack of this equipment restrains RIT from introducing new programs in line with changing technology in industry. There has been no substantial capital investment in RIT campuses for a decade. Equipment is often purchased not according to the skill level and degree of competence required by the curriculum but rather in relation to the budget

	allocation.
Student/teacher ratios are generally satisfactory (World Bank, 1996).	Recurrent budget support for repairs has been constrained in recent years. Operations and Maintenance (O&M) budgets are usually quite small (estimated at less than 1% of recurrent budget) in most institutions. Consumable materials are usually in short supply and are funded with inadequate budgets. Some cost recovery is obtained from students who purchase supplies used in their studies, but the amount is not sufficient to meet the needs. As a result, the supplies are often inadequate to support the programs offered and the equipment base has aged through less than adequate maintenance and a lack of replacement following depreciation (World Bank, 1996).
Placement rates are high, reflecting robust demand for skilled workers in the economy. The system served the nation and the economy well until the early 1980s, when new economic policies and opportunities led to the current pattern of rapid economic change (World Bank, 1996).	With the rapid expansion of VTE enrolments, the inability of institutions to recruit sufficient numbers of fully qualified VTE teachers is become increasingly serious.
The types of equipment in the RIT are reasonably well balanced relative to the programs being offered. There are significant amounts of medium to high technology equipment installed in the various campuses.	Similarly, the design of buildings for the various institutions is often based less on educational specifications and more on finance availability. Buildings among technical institutions are diverse in design and functionality. Some are of excellent design and utility, but many are old and the majority are in need of maintenance and upgrading..
Although quite insufficient in quantity, the higher technology equipment is generally up-to-date and well maintained.	Some institutions are over-utilized in specific facility areas while under-utilized in others (typically, workshops and laboratories). This often results from an imbalance in the classroom to workshop/laboratory capacity ratios, which, in turn, significantly reduces the instructional capacity of the institution (World Bank, 1996)

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Formal Vocational and Technical Educational System



Vocational Training in a Changing Economy: The Case of Thailand (1991)

**Number of Student by Jurisdiction in Thailand:
Academic Year 2004**

Jurisdiction	Number of Student
Grand Total	16,119,640
Ministry of Education	15,243,748
Org. under MOE's Jurisdiction	15,227,612
1. Office of the Permanent Secretary:	3,880,370
1.1 Non-Formal Education	1,678,645
1.2 Private Education	2,201,725
2. Office of the Basic Education Commission	8,823,849
3. Office of the Higher Education Commission	1,891,693
4. Office of Vocational Education commission	631,700
Public Organizations	16,136
5. Mahidol Wittayanusorn School	701
6. Mahamakut Buddhist University	6,436
7. Mahachulalongkorn rajavidyalaya University	8,999
Others Organization	875,892
1. Bangkok mettopolitan: Education Department	347,638
2. Royal Thai Police:	28,386
2.1 Border Patrol Police General Headquarter	27,189
2.2 Police Cadet Academy	1,197
3. Ministry of Interior: Department of Local Administration	393,487
4. Ministry of Social Development and human Security	626
5. Ministry of Public Health: Praboromarachanok Institute of Health Workforce Development	18,084
6. Ministry of Transport:	1,671
6.1 Merchant Marine Training Centre	911
6.2 Civil Aviation Training Centre	760
7. Bureau national Buddhism	51,950
8. Ministry of Culture: The Fine Arts Department	9,831
9. Ministry of Tourism and Sports : Office of sports and Recreation Development	16,883
10. Ministry of Defence: Armed Forces Education Department, Supreme Command	7,336

Jurisdiction	School			Teacher			Student		
	Bangkok	Regional	Total	Bangkok	Regional	Total	Bangkok	Regional	Total
Grand Total	1,644	37,788	39,432	85,191	560,402	645,593	2,638,100	13,481,540	16,119,640
Ministry of Education	1,185	36,596	37,781	70,639	531,868	602,507	2,278,043	12,965,705	15,243,748
Org. under MOE's Jurisdiction	1,183	36,577	37,760	70,443	531,458	601,901	2,274,781	12,952,831	15,227,612
Office of the Permanent Secretary	952	3,817	4,769	29,618	9,030	119,918	606,409	3,273,961	3,880,370
Non-Formal Education	44	931	975	226	2,648	2,874	105,623	1,673,022	1,678,645
Private Education	908	2,886	3,794	29,392	87,652	117,044	500,786	1,700,939	2,201,725
Office of the Basic Education Commission	157	32,256	32,413	13,453	405,427	41,8880	313,673	8,510,176	8,823,849
Office of the Higher Education Commission	53	113	166	26,084	20,106	46,190	1,310,113	581,580	1,891,693
Office of Vocational Education Commission	21	391	412	1,288	15,625	169,313	44,586	587,114	631,700

www.moe.go.th/English/