

Chapter 7

Vocational Education in Thailand: Its Evolution, Strengths, Limitations, and Blueprint for the Future



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Abstract This chapter presents the context and evolution of vocational education in Thailand and the authors' insights into the Thai vocational education system in terms of its strengths and limitations. It utilizes both SWOT (strengths, weaknesses, opportunities, and threats) and PEST (political factors, economic factors, sociocultural factors, and technological factors) analysis frameworks. The chapter demonstrates how the Thai vocational education system, which currently reflects the metaphors of "impossible dream" and "a tale of two cities," can perform better in order to serve as a key engine bringing Thailand toward prosperity under the Thai government's slogan "vocational education for nation building."

7.1 Introduction and Background

At the time of this manuscript preparation, various media in Thailand are reporting an increasing popularity of the vocational education track among Thai youth. This news is pleasing many Thai educational planners and policy makers. In a country like Thailand where the *diploma disease* (Dore 1976) has been pervasive and the kind of degree or certificate possessed strongly influences opportunities in a hierarchy of jobs ranked by power, income, and prestige, vocational education has been considered as an option for low academic achievers and/or students from a humble background. For middle and upper class youth, their norm is, on the contrary, to choose the general secondary education track as a direct pathway to receive higher education degrees. *Rian pen chao khon nai khon* ('เรียนเป็นเจ้าคนนายคน') (learn so as to be the boss of others) is what the Thais have been inculcated with for generations.

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During 2005–2010, the Ministry of Education (MOE) reported a significant increment in the numbers of upper secondary education students both in the vocational education and general education tracks. Unfortunately, the proportion of students in the general education track had increased at the expense of those students in the vocational education track. In 2005, the ratio of general to vocational upper secondary education students was 60:40, and in 2010 the situation became undesirable when the ratio turned to 64:36 and 69:31 in 2015 (MOE 2016). There is also concern about the fields of study. The growth rates of vocational education students were calculated for each field of study between 2005 and 2010, and it was found that a positive growth rate of 77.1% was found for the tourism industry, while the growth rate of the industrial engineering field was only 8%. More vocational education students in science and technology are critically needed (see Chaps. 16 and 17).

Krissanapong et al. (2012) estimated that if this trend persists without government interventions, the proportion and actual number of students in vocational education will constantly decrease. They further report that the reasons students selected general upper secondary education are (1) self-esteem (45%); (2) influence of parents, relatives, or friends (21%); (3) opportunities for further education (17%); and (4) desire for higher education certificates and career advancement (17%). As for vocational upper secondary education students, their reasons to study vocational education are (1) preference for practical-based learning over theoretical learning (39%); (2) urgent demands and needs of the Thai labor market (22%); (3) less difficult and less competition (20%); (4) influence of parents, relatives, or friends (14%); and (5) affordable tuition fees (5%).

For educational policy makers believing in the *social demand approach* to educational planning, the thirst for higher education among the Thais may not be something that we should discourage. The proponents of this approach argue that higher education should be provided to all qualified candidates because it is difficult to force young people to study subjects in which they are not interested. Also it is exceedingly hard to forecast in advance what kinds of training will be needed in a rapidly changing economy (Bereday et al. 2006; Did you know? 2018).

Unfortunately, in the era of massification and universal access to higher education in Thailand, more than 120,000 Thai university graduates are unemployed yearly, and the percentage of unemployed with higher education certificates has been much more prevalent compared to their less educated counterparts (see Chap. 9). The research of our Labor Development Division at the Thailand Development Research Institute (TDRI), commissioned by the Office of Education Council (OEC), Ministry of Education, showed that the Thai labor market is currently in urgent need of mid-skilled human resources, while the demand for higher education workers in the labor market has failed to keep pace with the rapid increase in the supply of higher education graduates (TDRI 2010). In addition, to escape the middle-income country trap, Thailand needs to improve the productivity of Thai laborers by employing semi-skilled and high-skilled workers excelling in advanced technologies. Thailand can no longer rely on cheap unskilled labor as the country's minimum wage (roughly \$10 per day) is among the highest in Southeast Asia, while the productivity of Thai labor has been increasing only 3% per year. The noted

economist Nobel laureate Paul Krugman (1996) argues that the economic future of any country depends on the productivity of its people. During its period of high economic growth, 1960–1990, Japan’s productivity per person increased faster than at any time in world history (Nihon Seisensei Honbu 1989).

Our own perspective leans toward the *market requirement approach* to educational planning. We call for a more labor market demand-driven educational system as the Thai one has been too supply-driven. Educational institutions produced graduates based on their expertise and availability without sufficient consideration for the demands of the labor market and future job prospects for their graduates. Our goal is to improve the quality of vocational education and increase the percentage of students choosing this track as much as possible. Recently, as part of a series of initiatives for human resource production and development during the second decade of education reform (2009–2018), the MOE established a goal that the proportion of vocational education students to general secondary education students at the upper secondary education level should be 60:40 (OEC 2011). This is an extremely ambitious goal and might be an “impossible dream.”

In this chapter, we first provide the context and evolution of the Thai vocational education system, followed by an analysis of its strengths, weaknesses, opportunities, and threats (SWOT analysis). Those strengths and weaknesses refer to the internal factors within the vocational education system, while the opportunities and threats or the external forces are analyzed by the PEST (political factors, economic factors, sociocultural factors, and technological factors) analysis framework. We hope that our critical analyses of historical trends as well as identifying both facilitators and obstacles of the Thai vocational education system will provide insight into how the vocational education system can perform better and how it can serve as a key engine bringing Thailand toward prosperity.

7.2 The Evolution and Changing Contexts of Thai Vocational Education

7.2.1 *Historical Overview and Trends of the Thai Vocational Education System*

The history of vocational education in Thailand dates back to the late nineteenth century, when Thai citizens increasingly earned their living through handicraft professions instead of relying principally on agriculture. The systematic form of vocational education was included in the Educational Project B.E. 2441 (1898) as *special education (kansueksapiset)* (การศึกษาพิเศษ), or an education in specific subjects for enhancing specific skills and expertise. In 1909, education in Thailand was divided into two types which were *formal schooling (samansueksa)* (สามัญศึกษา) and *non-formal schooling (wisamansueksa)* (วิสามัญศึกษา). Formal schooling offered general subjects, while nonformal schooling offered vocational subjects such as medicine,

midwifery, nursing, English, commerce, and teaching. The commercial schools at Wat Maha Phruttharam and Wat Ratchaburana were established as the first vocational schools in the country in 1910. The Pohchang Academy of Arts and the Teachers' Training School of Agriculture were established in 1913 and 1917, respectively (VEC 2016) (<http://www.vec.go.th/>).

Vocational education in Thailand became increasingly prevalent when the National Education Plan B.E. 2475 (1932) recognized the importance of this area of learning. The plan defined *nonformal schooling* as vocational subjects taught in compliance with the national context and geography, e.g., agriculture, handicrafts, and commerce, which equipped students with fundamental skills in agriculture and industry. Nevertheless, the term *vocational education* did not yet appear until it was first coined in the National Education Plan B.E. 2479 (1936). At that time, vocational education was divided into three levels, namely, fundamental, intermediate, and higher vocational education, and recruited students who had completed formal education schools (VEC 2016).

The critical point in the history of education is that over the entire 100 years of its evolution, it has needed to “play catch-up” with general education that was developed earlier. Both the National Education Plan 1932 and 1936 emphasized only three educational domains, namely, the affective domain (*chariyasueksa*) (จริยศึกษา), the cognitive domain (*phuthisueksa*) (พุทธิศึกษา), and the psychomotor domain (*palasueksa*) (พลศึกษา), and the German educational philosophy valuing craftsmanship (*hatthasueksa*) (หัตถศึกษา) (India Jana Duniya 2016). Thai vocational education was later added to the National Education Plan B.E. 2494 (1951) as the fourth pillar of Thai education. Besides, vocational education has not been considered as a direct pathway to universities because higher education had been reserved only for the top students who completed general upper secondary education. The most obvious historical evidence in this regard is the educational policies articulated in 1932 by Phraya Manopakorn Nititada, the first Prime Minister of Thailand, which stated that:

In terms of vocational education, the government shall soon establish nonformal schools offering courses in agriculture, handicrafts, and commerce at the primary education level and higher in order to eliminate the dominance of formal schooling. Higher education institutions offering degree-level courses like in advanced countries shall be provided to Thai youth. Comprehensive upper secondary education schools preparing students for universities shall be established in regional hubs so that intelligent students in provincial areas will have better access to this level of education.

The National Education Plan 1936 also required that those who desired to pursue university education must complete *triamudomsueksa* (เตรียมอุดมศึกษา) or 2-year upper secondary education preparing students for universities.

As the latecomer, vocational education had been originally placed in an inferior administrative position compared to its general education counterpart. In 1938, vocational schools had been supervised by just a division in the Department of Curriculum and Instruction Development, while formal education schools were managed by the Department of General Education. According to the Royal Decree

of Structural Reform of the Dhammakan Ministry, two departments were established, namely, the Department of General Education and the Department of Curriculum and Instruction Development. The Vocational Education Division was included in the latter together with the Office of the Secretary, Textbook Division, and Examination Division. Later on, the Dhammakan Ministry was renamed as the Ministry of Education according to the Restructuring of Government Agencies Act B.E. 2484 (1941). Under the promulgation of this act, the Technical Department was downsized to be the Technical Division, and the Department of Vocational Education was established. This newly established department was divided into three divisions which were the Secretariat Office, School Division, and Academic Division. On 7 July 2003, the Department of Vocational Education was upgraded to become the Office of the Vocational Education Commission, announced in the 2003 *Government Gazette* (<http://www.vec.go.th/>). Within this newly structured Ministry of Education, the Office of the Vocational Education Commission now has an equal bureaucratic status with the Office of the Basic Education Commission, the Office of the Higher Education Commission, the Office of the Permanent Secretary, and the Office of the Education Council. These major offices are considered as the “five pillars” of the restructured Ministry of Education.

Despite inferiority complexes associated with vocational education throughout its evolution, the government has made ceaseless efforts to improve Thai vocational education both in terms of quantity and quality. During the period of the US war in Vietnam, the Department of Vocational Education was faced with shortages of instructional materials as well as teachers and educational personnel. However, after the war, the government allocated more budget to vocational education in order to help improve the situation.

In collaboration with the government of Germany, the Department of Vocational Education established Khon Kaen Technical College in 1965. In 1969, the Thai-Austrian Technical College was founded in Chonburi Province by the constructive cooperation between the Thai government and that of Austria. During this period, many vocational education institutes started offering education at the diploma level and were authorized as colleges. The first college established by the Department of Vocational Education was Phranakorn Commercial College. In 1971, King Mongkut’s Institute of Technology, which had three campuses in North Bangkok, Thonburi, and Ladkrabang, was established by the amalgamation of North Bangkok Technical College, Thonburi Technical College, and the Telecommunication College in order to produce vocational education school teachers. It has now become a major research university (see Chaps. 9 and 16). As of 1979, there were 90 colleges out of 159 vocational education institutes under the Department of Vocational Education. A certificate in vocational education was launched in 1981. Vocational education and higher technical diplomas were introduced in 1984. In 1990, a higher diploma in teaching technology was also launched. Between 1990 and 1992, 20 vocational education institutes were established, and during 1992–1996, the government set up 93 more vocational education institutes in order to serve rural needs. In 1995, the Department of Vocational Education developed information and communication technology infrastructure in order to provide distance vocational education. In 1997,

the government supported the establishment of 70 industrial and community education colleges, 19 technical colleges, and 2 colleges of business administration and tourism. In 1998, the Pathumwan Institute of Technology was granted authority to provide bachelor's degree level courses in science and technology (Krissanapong et al. 2012).

As of 24 June 2015, there were 426 vocational education institutes in Thailand under the jurisdiction of the Vocational Education Commission, and they are categorized as follows: 128 technical colleges, 37 vocational colleges, 43 agricultural and technology colleges, 52 polytechnic colleges, 136 industrial and community colleges, 5 commercial colleges, 3 industrial and ship building colleges, 2 arts and crafts colleges, 4 business administration and tourism colleges, 3 fishery colleges, 1 Kanchanapisek Golden Jubilee Royal Goldsmith College, 9 colleges of technology and management, 1 science-based technology vocational college, 1 vocational education college, and 1 fishery and agricultural technology college. The student to teacher ratio in vocational schools under the jurisdiction of the Office of the Vocational Education Commission and the Office of the Private Education Commission in 2012 was at 26.2:1 and 21.2:1, respectively (<http://www.vec.go.th/>). These figures are considered acceptable and meet international standards. Unfortunately, there is a high turnover rate among vocational school teachers who have not yet received official government status, and many vocational school teachers are assigned to teach in subjects outside their areas of expertise (*Tul Na Rachadamneon 2011*).

In terms of quality development, for decades, the Thai government has collaborated with other countries and international organizations to improve Thai vocational education. In 1967, the Department of Vocational Education established the World Bank Loan Office responsible for cooperating with 25 colleges for the development of industrial and agricultural education. In 1988, the government of Germany supported the development of dual vocational training in Thailand. Germany is renowned for the use of dual vocational training to prepare skilled technicians for its labor market and is among the world leaders in foreign exchange holdings, based primarily on its export competitiveness. Between 1989 and 1990, the Institute of Vocational Teacher Competency Development was established with the assistance of the United Nations Development Programme (UNDP). In 1990, additional assistance was received from Denmark, Austria, Japan, Canada, Italy, the International Labour Organization (ILO), and United Nations Education, Scientific, and Cultural Organization (UNESCO). During 1993–2000, the Overseas Economic Cooperation Fund of Japan subsidized the budget of the Department of Vocational Education to develop education in the area of mechatronics. In the year of comprehensive education reform in 1999, the Department of Vocational Education received a loan from the government of Denmark for the development of agricultural education to strengthen teacher competencies and instructional materials (Krissanapong et al. 2012).

Radical changes in vocational education have been implemented since the education reform of 1999. The National Education Act B.E. 2542 (ONEC 1999) and amendments in its Section 6, Paragraph 47 mandated the establishment of an educational quality assurance system for all levels and types of education. This act

resulted in the passage of the Vocational Education Act B.E. 2551 (2008) and the Thai Qualification Framework for Vocational Education (TQF: VEd or TVQ) B.E. 2554 (2011). In 2011, the Thailand Professional Qualification Institute (public organization) was founded to promote a professional qualification system in Thailand. More specifically, the first decade of the education reform (1999–2008) led to the first Vocational Education Act which aims to ensure quality while promoting a more decentralized vocational education system to widen participation of the unreached and to foster the active involvement of the industrial and service sectors. The second decade of education reform (2009–2018) has emphasized quality more than access (OEC 2009). It has stressed the development of vocational education standards, TVQ, and collaboration between schools and enterprises in order to ensure the employability of graduates (Siripan et al. 2012).

7.2.2 Current Vocational Education Reform Initiatives

The second decade of education reform (2009–2018) has been driven by various well-designed policies and laws. The National Education Act B.E. 2542 (1999, 2002) and amendments, which have been regarded as the master plan for Thailand's education reform for two decades, stipulated that vocational education shall be provided in educational institutes belonging to the state or private sector, enterprises, or those organized through cooperation between educational institutes and enterprises in accordance with the Vocational Education Act and relevant laws.

This act enabled the innovative provision of vocational education in the forms of adopted and industrial-led programs. In the “adopted programs,” enterprises provide schools with financial contributions, equipment, staff development, experts, and other resources based on agreements between participating partners. An example of a highly successful adopted program is innovative strategies of the adopted programs including work-based learning, a competency-based curriculum, and better job opportunities for students. Success depends on the active relationship between partners with mutual benefits, opportunities of teachers for training in the workplace, and flexible bureaucratic school systems (Siripan et al. 2012).

Unlike the adopted programs, the industrial-led programs are organized independently by enterprises. For example, the Panyapiwat Techno Business School of the CP All Company (part of the CP corporate conglomerate) provides a 3-year vocational secondary education preparing workers for 7-Eleven convenience stores throughout Thailand. Although this industrial-led program is tailored to the demands of the CP All Company, the curriculum structure is based on the Ministry of Education's core curriculum. As a result, Panyapiwat Techno Business School's students are eligible to receive a certificate in vocational education the same as those from other government schools. A key feature of this industrial-led program is work-based learning in the form of “dual vocational education.” Students spend 3 months in school and another 3 months in 7-Eleven convenience stores during the 3-year program. In other words, students are considered as employees from the very

first day of enrollment in the school. They earn income during their practical experiences at the workplace. An important innovation of this program lies in its distant learning mode for up to 10,000 students who enroll at 20 centers and 70 network schools. All students receive the same quality standard of theory subjects, and they are provided practical training by well-trained and experienced staff at the workplace. This program is highly successful because of the active administrative team and teachers who always seek for continuous improvement of the program. It equips students with attractive practical experiences and requires attributes for working in the retail sector (Siripan et al. 2012). However, except for financially challenged students, working during study is quite uncommon for Thai youth. The Panyapiwat Techno Business School is organizing more campaigns to make parents and the public realize the benefit of work-based learning (Fry 2015).

Such campaigns and initiatives are important. Otherwise Thai vocational education will not be in compliance with the Vocational Education Act B.E. 2551 (2008). The Act stipulates that vocational education shall be provided in three forms, namely, formal vocational education, nonformal vocational education, and dual vocational education, with special preference for the last type. The Act envisions competency-based curricula emphasizing entrepreneurial skills and work ethics. Another principle laid out in the Act in response to the 11th National Economic and Social Development Plan B.E. 2555–2559 (2012–2016) is establishing a system of vocational qualifications in order to create a better bridge between education and work, thereby enabling individuals to enter the world of work and come back to engage in education and training at any time, a key element of effective human resource development. As a result, the Act specifies the target group of vocational education and training as covering the country's school-age population as well as members of the existing labor force who wish to upgrade their knowledge and skills. The Act complements perfectly with the Skill Development Promotion Act B.E. 2545 (2002) and the Regulations on Criteria and Procedure for Assurance of Thai Labor Standards B.E. 2546 (2003) developed earlier by the Ministry of Labor. The Skill Development Promotion Act B.E. 2545 (2002) promotes cooperation between private establishments and educational institutes. It offers certain privileges and tax incentives for private establishments that provide occupational skills training services to their employees. The Skill Development Fund has been established to facilitate skill development promotion activities.

Later the Thailand Professional Qualification Institute (TPQI) (public organization) was founded in 2011 in order to promote the development of professional qualification system in Thailand. From our perspective, this is a remarkable milestone in Thai vocational education history as it will facilitate linkages among formal, non-formal, and informal education. Workers certified by TPQI shall be paid based on their actual skills and competences rather than their educational degrees obtained from formal schooling. Furthermore, the qualification system demands development of competency-based vocational education curricula and occupational standards that will promote better relevance of education to the labor market. Since its establishment, TPQI has collaborated with 13 organizations both in Thailand and abroad, including the Office of the Vocational Education Commission of the Ministry of

Education and the Department of Skill Development of the Ministry of Labor, in order to develop a professional qualifications framework in the country. It was expected that the occupational standards and professional qualifications certifying system would be finalized by the fiscal year 2014. As of 2014, occupational standards have been developed for 14 industries, including petroleum and petrochemicals, construction, information and communication technology, Thai cuisine, logistics, spa and beauty care, high-speed trains and railways, dressmaking, airline business, flower arrangement business, automotive services, photography business, printing business, and tool and die engineering. In the 2013 fiscal year, TPQI concluded a memorandum of understanding with five educational institutions that will be authorized to conduct occupational standards test for workers in three industries (TPQI 2014).

The aforementioned laws were additionally transformed to other sound policies included in the National Education Plan (Revised Version) B.E. 2552–2559 (2009–2016) and the Vocational Education Development Strategic Plan B.E. 2552–2561 (2009–2018). Both plans are concentrated on competency-based pay, campaigns to improve the public image of vocational education, business incubation for student entrepreneurs, greater emphasis on dual vocational education and internships, and the development of a vocational education quality assurance system. The Vocational Education Development Strategic Plan B.E. 2552–2561 (2009–2018) specifies that the ratio of students in vocational upper secondary education and general upper secondary education should be 60:40 and the percentage of vocational education students engaging in dual vocational education should be at least 30%.

All in all, the proposal for second decade of education reform (2009–2018) highlights three policy pillars, which are (1) enhancement of educational quality and standards, (2) expanding lifelong learning opportunities for all Thai citizens, and (3) encouraging participation of all segment of society in educational provision and management. With reference to vocational education, national standardized tests upon completion of vocational education programs are required in order to ensure the quality of vocational school graduates. This Reform Policy Paper reaffirmed the needs for TVQ, work-based learning, dual vocational education, and entrepreneurial skills. A credit banking system has been proposed in order to support transition between school and work. In addition, the reform postulates the role of vocational education in the development of provincial clusters. Vocational schools and colleges that are qualified to offer the bachelor's degree in vocational education fields shall be promoted to be vocational education institutes (*satabanachiwasukesa*) (สถาบันอาชีวศึกษา) to provide complete linkage between vocational education at the basic level (certificate in vocational education or vocational certificate), intermediate level (diploma in vocational education or high vocational certificate), and advanced level (bachelor's degree). This reform includes ambitious targets to have 60% of upper secondary education students in the vocational track. Vocational education graduates must meet requirements of TVQ and international standards. Above all, employers or users of vocational education graduates should be satisfied with the quality of graduates. Vocational education graduates must be able to find jobs within 1 year upon graduation or must be able to establish their own businesses (OEC 2009).

7.2.3 Significance of Vocational Education for the Thai Labor Market and Economy

Various policy papers and legal acts described in the earlier section have repeatedly mentioned the magic ratio “60:40” because it is mandatory for Thailand now to increase the number of students in its vocational education track. Similar to other emerging Asian countries, Thailand cannot bypass manufacturing on its path to prosperity, and this process requires workers with quality vocational and technical skills. The Asian Development Bank (ADB) recommended that middle-income economies heavily dependent on labor-intensive sectors or currently bypassing industrialization should not neglect upgrading their industrial base. Manufacturing contributes to a high productivity service sector, technological innovation, and modernizing agriculture. It is an essential part of growth formula if Asian countries want to prosper and escape the middle-income trap. World history has demonstrated that no economy has reached high income status without reaching at least 18% share of manufacturing in output and employment for a sustained period. To do so, emerging Asian countries need to improve their educational systems (Singapore: Asia cannot bypass manufacturing 2013).

For decades, Thailand’s industrial and manufacturing sector development has been spurred by international direct investment. The Plaza Accord of 1985 resulted in an appreciation of the Japanese yen. Since then, many Japanese corporations decided to move their manufacturing base to Thailand to enjoy cheaper labor and decent industrial infrastructure developed, for example, through the Eastern Seaboard Development Plan (1981–1994). However, employment in the private sector in 1991–1993 was still dominated by labor-intensive and natural resource-intensive industries, e.g., textiles and garments, construction, and furniture. Employment in technology-based industries, e.g., electric appliances, mechanical appliances, and automobile and automotive parts had been underrepresented until the Asian economic crisis of 1997. This crisis had turned out to be a great opportunity for Thailand to improve export industries due to the depreciation of Thai baht and relatively cheap labor. As a result, the Thai industrial sector had rapidly recovered along with greater expansion of the service sector in hotels, restaurants, and tourism (TDRI 2012a) within 2016 the lowest unemployment rate, 0.9%, among major economies (Economic and Financial Indicators 2017). Economic growth for 2017 is projected to be in the 3–4% range (Suchat 2016).

During 2001–2003, positive changes were noted in the Thai industrial sector. Technology-based industries had increasingly played roles in employment, especially among workers receiving education beyond the diploma levels. Thailand’s economic recovery resulted in an appreciation of the Thai baht and higher wages for workers. International entrepreneurs needed to adjust their manufacturing strategies by replacing low-skilled labor with more advanced technologies and machines. A remarkable expansion of technology-based industries and increased employment in the financial sector was seen during 2004–2006, leading to increasing demand for both vocational education and higher education graduates. Although the worldwide

economic recession starting in 2008 affected Thailand's exports, skilled workers had been less affected by this crisis than unskilled workers because entrepreneurs had decided to keep competent rather than unskilled workers. Service sectors such as commerce, hotels, and restaurants had absorbed laid-off workers from industrial sectors, resulting in a decreased share of labor in the industrial sector and an increased share of labor in the service sector (TDRI 2012a). As a result, the proportion of employed persons in the industrial sector tended to be constant during 2001–2010, but persons employed in the service sector continued to rise. At the end of the last decade, the percentage of persons employed in the agricultural and service sectors in 2010 was roughly equal with 40.7% in the agricultural sector and 40.1% in the service sector (Yongyuth et al. 2012).

The *World Factbook* (United States 2017) reported Thailand's GDP composition by sector of origin, 8.9% agriculture, 36.8% industry, and 52.7% services. The percentage of the labor force in agriculture was 8.9%, in industry 35.9%, and in services 55.3%. Although Thailand's economic growth during the last two decades has been driven by the expansion of employment in the industrial sector and capital investments, productivity gains have been unsatisfactory and less than one-tenth of the growth resulted from human resource improvements (World Bank 2012). The education reform of 1999 (ONEC 1999) initiated a 9-year compulsory education and 12-year free basic education, and thus, the educational attainment level of Thai laborers has dramatically increased. Unfortunately, skill shortages, mismatches between skills and needs, and skill gaps are present, reflecting poor linkages between education and the labor market both in terms of quantity and quality. This problem has persisted for several decades (Varaporn and Fry 1980). We are not arguing here that vocational education school graduates are more important to the Thai economy than low-skilled workers or university graduates. However, we are noting the importance of increasing the number of vocational school graduates especially at the upper secondary education level who are ready and willing to find jobs in the labor market because of "excess demand" for them.

In the first quarter (January–March) of 2015, the number of employed persons in the nonagricultural sector increased from 25.8 million to 26.1 million, while those in the agricultural sector decreased from 12.0 million to 11.5 million. The increment of employed persons in the nonagricultural sector was found in various industries, such as manufacturing, hotels and restaurants, and construction. The number of employed persons with an upper secondary education level and higher levels increased by 0.2 million compared to the same period in 2014, while workers with no education and with less than elementary education decreased by 0.4 million, elementary level decreased by 0.3 million, and the lower secondary level decreased by 0.1 million. However, looking at the total labor force or the population 15 years and over (55,090,300), the aggregated amount of the labor force with no education, less than elementary education, and lower secondary education was together 36,976,400, accounting for 67.1% of the total labor force. In other words, only 32.9% of the Thai labor force had received education beyond the compulsory education level. The share of the labor force with vocational upper secondary education was only 3.4% (1,867,300 individuals). The labor force with a technical higher

education degree was 2,305,100 which accounted for 4.2% of the total labor force. To complicate matters further, the higher the level of educational attainment, the higher the numbers of the unemployed. Unemployment was prevalent among the teenager group (15–24 years old) with an unemployment rate of 4.3%, while the unemployment rate among the adult group (25 years and over) was only 0.5% (National Statistics Office 2015). Needless to say, although the majority of the Thai labor force obtained no more than 9 years of compulsory education, a higher level of education does not necessarily contribute to higher employability.

Having said all this, we carefully use the term “oversupply” of higher education graduates here. We agree with what Coombs (1967) noted many decades ago that educational planning is more sociological, psychological, political, and pedagogical in character than it is economically, although we lean toward the market requirement approach to educational planning. Taking Coombs’ perspective into account, it seems ridiculous to view Thailand as being “overeducated” when large numbers of its people are still functionally illiterate and poor. If education inspires new aspirations and initiatives in people, it may have consequences that for better or worse reach far beyond the statistics of unemployment. “Over-education” is a loaded term that ignores the wider functions of education outside individuals’ working lives or as a source of their well-being in itself (Andrews et al. 2014; Noddings 2003; OECD 1999).

Nevertheless, the Thai labor market has not been able to provide enough jobs for the large influx of highly educated workers, while it has experienced a shortage of low-skilled and mid-skilled human resources. Thailand might be still trapped in a low-skilled, low-technology, and low value-added economy if the country does not upgrade its industrial base and use more effectively the available pool of highly educated workers. Although Thai laborers have been slowly shifting toward occupations demanding higher skills, demand for low-skilled workers obtaining lower secondary education and lower levels of schooling may not have actually decreased. Currently tourism is one of Thailand’s fastest growing industries, and the skill requirements for many working in this rapidly growing industry are minimal (e.g., those cleaning hotel rooms, bellboys/girls, etc.)

The decline in the share of low-skilled labor in the Thai labor market might be just a result of their limited supply due to better access to continuing formal schooling. In reality Thailand still needs to import large numbers of low-skilled laborers from neighboring countries or to employ general upper secondary school graduates to do low-skilled jobs. As of 2009–2010, only 19.2% of the Thai labor market was able to absorb skilled laborers with vocational upper secondary education, diplomas in vocational education, or bachelor’s degree and higher levels of education, although this figure increased significantly from only 8.8% earlier in 1991–1993 (TDRI 2012a).

During the past 20 years (1991–2010), the growth rate of laborers with upper secondary education in the academic stream, bachelor’s degree, and master’s degree and higher was much faster than for those laborers with vocational upper secondary education. The highest growth rate was found at the master’s degree and higher level with an average growth rate of 10.5%. The average growth rate of laborers with vocational upper secondary education was only 2.5%, while the average growth

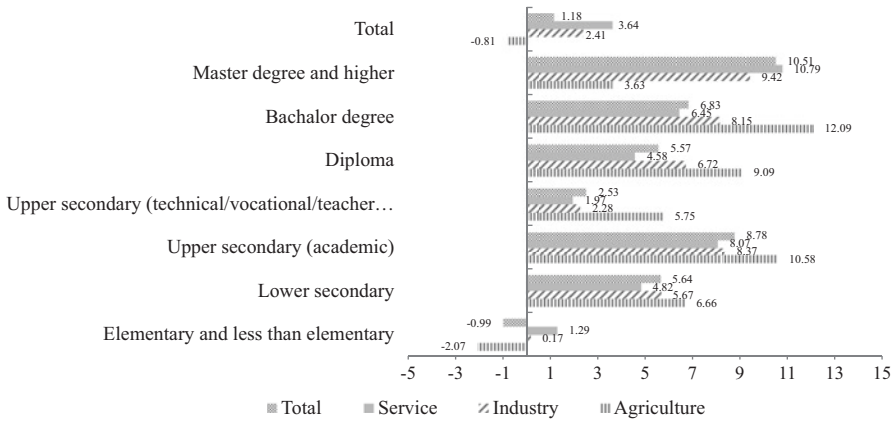


Fig. 7.1 Average labor growth rate (1991–2010), by educational attainment and sectors. Calculated growth rate by Thailand Development Research Institute based on the Labor Force Survey (third quarter, 1991–2010) (Adapted from “Innovative secondary education for skills enhancement: Skills for employability: Southeast Asia,” by Yongyuth et al. (2012), p. 5. Reprinted with permission from the Results for Development Institute)

rate of laborers with general upper secondary education was 8.8%. Although the overall growth rate of laborers in the agricultural sector contracted, among vocational upper secondary education laborers, the growth rate was surprisingly much higher in the agricultural sector (5.8%) than in the industrial (2.9%) and service sectors (2.0%). A similar trend was also noticed at the bachelor’s degree level, diploma level, upper secondary education in the academic track, and lower secondary education level. Such a pattern of labor growth rate created a concern that Thailand has not been having strong and sustainable value-added industrial and service sectors despite increasing levels of educational attainment of its population (Yongyuth et al. 2012) (see Fig. 7.1).

Our study of the demand for manpower production and development of the country (action plan at the provincial cluster level), which TDRi conducted in collaboration with the OEC in 2009–2010, showed that by 2020 Thailand will have a greater need for a work force with all levels of education, but demand for those at the diploma level and master’s degree and higher will be stable. Estimates, based on labor force data of 2009, are that by 2020 Thailand will have encountered “excess demand” for human resources with lower secondary education, but upper secondary education graduates will be in “excess supply.” If the supply of labor is defined as those new entrants to the labor market, both unemployed persons seeking and not seeking jobs, there will be an “excess supply” of laborers with vocational upper secondary greater than the excess supply of those with general upper secondary education. However, projections under an alternative assumption, which excludes unemployed persons not seeking jobs, the supply of upper secondary education graduates both in the academic and vocational tracks will be much less than the demand. In other words, the “excess demand” for mid-skilled human resources will

be prevalent by 2020 because many upper secondary education graduates, especially from the academic stream, will be unemployed persons not seeking jobs. There will be an “excess demand” for those with vocational upper secondary education backgrounds in almost all provincial clusters and the Bangkok Metropolis, especially the Eastern Seaboard provincial cluster, Upper Central provincial cluster 1, and the Lower Central provincial cluster 1. An “excess supply” of this group of laborers will be seen only in two provincial clusters: the Northeastern provincial cluster 2 and the lower Northern provincial cluster 1. As for laborers with a diploma in vocational education, none of the provincial clusters will demonstrate “excess demand.” In other words, Thailand has been currently producing too many vocational education graduates at the diploma level. Similar trends are noticed among workers with a bachelor’s degree. An “excess supply” of college graduates will be found in all provincial clusters and Bangkok Metropolis, except the Andaman Sea Southern provincial cluster (TDRI 2011).

According to the most recent Labor Demand of Establishment Survey conducted in 2013 by the National Statistics Office among 189,182 establishments throughout the Kingdom, 59.4% of vacant positions had not yet been filled after more than 6 months. The most demand was for skilled workers such as embroidery workers, cloth makers, air conditioner technicians, car and vehicle technicians, and welders. The most prevalent shortage of laborers was seen among workers with secondary education and lower levels, followed by workers with any levels of education. The shortage of laborers with a certificate in vocational education accounted for 17.3% of the total labor shortage. The corresponding figure for a diploma in vocational education or its equivalent was much less at only 8.7%. As for the bachelor’s degree and higher levels, the shortage accounted for 15.2%. However, when comparing the numbers of unemployed persons to the numbers of workers in demand, the number of unemployed persons with certificates in vocational education (39,900) was much lower than the demand for them (57,200), while unemployed persons at the diploma level (43,600) and bachelor’s degree and higher levels (79,500) were almost double the demand for them. Even among the low-skilled workers with secondary education and lower levels, 119,800 were unemployed, while the demand for them was 99,700 (National Statistics Office 2014).

The “excess demand” for those workers with a certificate in vocational education has led the government to try to increase the ratio of high school graduates in the vocational education track. Nevertheless, Thailand has faced a serious shortage of workers with a certificate in vocational education at the same time that the country in general has had unemployment problems (but much less than most countries, Economic and Financial Indicators 2017). The relevance of training and quality of graduates should be also taken into account. A comparison of unemployment rate by educational attainment between 1987 and 2010 showed that the unemployment rate for vocational upper secondary education graduates was almost double compared to their academic track counterparts. In this regard, public hearings among educational experts and employers conducted by TDRI in recent years revealed that their unemployment might result from their poor quality. Employers are still wanting workers with technical skills, but the quality of vocational school leavers is not

as high as expected, and many of those with certificates in vocational education workers are non-science and technology (S and T) graduates. Another reason might be that their skills are too specialized, while the general upper secondary education graduates acquired general skills that contributed to their greater flexibility and better adaptation to the labor market (Yongyuth et al. 2012).

In this regard, evidence demonstrating the mediocre quality of vocational education students and graduates is ambiguous. In 2012, our Labor Development Division at TDRI conducted research on indicators and benchmarks of the quality of vocational education and secondary education graduates during the second decade of education reform, which was commissioned by the OEC. A secondary analysis of the second-round external evaluation of vocational schools in 2006–2010 by the Office for National Education Standards and Quality Assessment (ONESQA) reported “good” and “excellent” overall quality of vocational education graduates, especially those from public vocational schools. Unfortunately, the Vocational National Educational Test (V-NET) scores of those receiving third year certificates in vocational education in 2011 were quite low. Mean scores were lower than 50% in all subjects, which included (1) generic and learning competences, (2) fundamental vocational competences, and (3) specific vocational competences. Fortunately despite such low test scores in terms of outcomes, the majority of vocational education graduates both at the certificate and diploma levels were able to get jobs, although some of them needed to work in fields unrelated to their studies. Such a mismatch was common among graduates obtaining certificates in vocational education in fisheries. As for those graduates with a diploma in vocational education, mismatches were found in the fishery and textile industries (TDRI 2012b).

Then, we collected additional primary data through a quantitative survey and semi-structured interviews with 315 employers in five provinces, Rayong, Chonburi, Nonthaburi, Samut Sakhon, and Samut Prakan (provinces with major industrial development), in order to investigate their satisfaction with the quality of vocational education graduates who are less than 22 years old. The majority of respondents were human resource managers (42%) in the manufacturing sector. According to the interviews, newest vocational education graduates are not able to perform required tasks due to their lack of skills and skill mismatches. As a result, employers need to provide on-the-job training for these new graduates lasting at least 1–3 months. In terms of “knowledge,” the quantitative survey showed that employers are most satisfied with graduates’ knowledge of principles and theories in their respective fields of study. The average satisfaction score for this item on a five-point scale is 3.89. Their professional knowledge in technology and innovation are also highly satisfactory. However, employers are unsatisfied with the English and other language knowledge of graduates (2.89). In the “skills” dimension, the highest satisfaction level was found with graduates’ ability to use tools, machines, and equipment for their respective occupations (3.84), followed by the ability to apply new knowledge in their jobs (3.73). Their other language skills (such as English) for day-to-day work are least satisfactory (3.00). Finally, in terms of required “attributes,” employers are most impressed by vocational education graduates’ interpersonal skills and ability to work in teams (3.97), followed by their compliance with regulations and

their work discipline (3.84). The least satisfactory attribute is graduates' creative communication skills (3.52) (TDRI 2012b).

Overall, vocational education graduates, especially at the certificate level, are important mid-skilled human resources that are in great demand, if Thailand wants to upgrade its manufacturing sector and create more value-added agriculture and services. Regrettably, Thailand has been faced with both “demand and supply” constraints in increasing the size of this group of laborers at the same time that the country has been encountering an “excess supply” of higher education graduates both at the diploma and the degree levels. In addition, a skill mismatch was found among vocational education graduates in some fields of study such as in the fishery and textile industries. The quality of vocational education graduates is mixed, showing both the satisfactory and unsatisfactory dimensions. Therefore, key challenges facing Thai vocational education are not only quantity issues but also the need to improve its relevance and quality.

7.3 Strengths and Limitations of Thai Vocational Education

Our analysis of the strengths and limitations of Thai vocational education according to the SWOT and PEST analysis framework in this section is based on our insights gained through various research projects on human resource production and development that TDRI has conducted for various Thai government agencies, e.g., the Ministry of Education and the Ministry of Industry, and international organizations, e.g., the Overseas Vocational Training Association (OVTA) in Japan and the Results for Development Institute in the United States. These projects offered us valuable opportunities to discuss with various policy makers and experts in vocational education such as Dr. Krissanapong Kirtikara who was recently Deputy Minister of Education and Dr. Siripan Choomnoom who is a former Deputy Secretary-General of the Office of Vocational Education Commission. Hearing the important voices of our research participants in vocational schools and in the private sector also contributed to our tacit knowledge and understanding of Thai vocational education. From our perspective, Thai vocational education demonstrated the following strengths and limitations:

7.3.1 Strengths

Internal strong points of Thai vocational education or its “strengths” according to the SWOT analysis framework are:

- The number of vocational education students at all levels had reached 725,490 persons in 2011 (http://www.moe.go.th/data_stat/) and dropped slightly to 654,083 persons in 2014 (<http://bms.voc.go.th/>) and then increased to 674,113 in

2015. The number has started to increase from the previous year, although at a slow pace.

- The Vocational Education Act B.E. 2551 (2008) and other subsequent laws have facilitated the emergence of a vocational education reform movement.
- By granting authority for vocational education institutions to provide training at the bachelor's degree level, it is expected that the strict separation of vocational and higher education will break down and will finally motivate more students to choose the vocational education track.
- The Ministry of Education has a clear goal to increase the percentage of students in the vocational upper secondary education track. Although the magic ratio of 60:40 seems to be too ambitious, before the end of the second decade of education reform (2009–2018) (OEC 2009), the government has tried its best to reach the ratio of 50:50 which is that existing in a newly industrialized economy such as Taiwan.
- The Office of the Vocational Education Commission is now urgently producing high-quality vocational education school teachers to replace thousands of teachers retiring in the next 10 years.
- The Office of the Vocational Education Commission is now collaborating with the private sector, the Ministry of Labor, and the Thailand Professional Qualification Institute in order to develop competency standards for various occupations which will finally contribute to the implementation of a competency-based vocational education curriculum.
- The Office of the Vocational Education Commission created a joint committee of public-private partnership for vocational human resource production in 25 occupational clusters in order to lead the development direction of vocational education and facilitate demand-driven vocational education.
- The Ministry of Education has attempted to raise the quality of vocational education through dual vocational education and work-integrated learning continuously and concretely.
- Five science-based technology vocational colleges were established with the view to enhance the quality of vocational education in science and technology. The Technician and Technologist Scholarships (2TS) were added to the One District One Scholarship (ODOS) project in order to prepare government officials in technical positions and teachers in vocational education colleges.

External factors supporting the advancement of Thai vocational education according to the SWOT analysis framework can be seen through the lens of the PEST framework as follows:

Political Factors

- Both the government and private sector have a consensus agreement regarding the importance of vocational education for Thai society. This is a really new phenomenon in Thai vocational education history.
- The current government headed by the National Council for Peace and Order (NCPO) views vocational education as an important part of the national agenda and has introduced the slogan, “vocational education for nation building.”

Economic Factors

- The Federation of Thai Industries estimated that the demand for vocational education workers has been approximately 89,642 persons between 2010 and 2015 or it has accounted for 36% of total demand for labor in the Thai labor market. It has also predicted that this demand will continue for a long period into the future.
- Various companies are now keen to engage in vocational education provision both directly and indirectly due to their demand for high-quality skilled technicians and incentives provided by the government.

Sociocultural Factors

- During the last 2–3 years, Thailand has made serious attempts to increase the proportion of students in vocational education. The Office of the Vocational Education Commission has initiated various campaigns to increase the popularity and improve the public image of vocational education in Thai society by introducing slogans such as “vocational education is a good choice, free tuition, and earn income”; “jobs are available for you after graduation”; and “study agricultural vocational education with free accommodations and free meals.” In addition, “Fix It Centers” have been created to provide vocational services to communities and improve the public image of vocational education and vocational education students.

Technological Factors

- A knowledge-based economy requires vocational education technicians. A country with a knowledge-based economy is where “the production, diffusion and use of technology and information are key to economic activity and sustainable growth” (OECD 1999, p. 7).

7.3.2 Limitations

Internal limitations or the “weaknesses” of Thai vocational education according to the SWOT analysis framework include:

- We agree with Hallinger and Lee (2011) that education reform in Thailand is not a “broken promise” but it is more accurately framed within the metaphor of the “impossible dream.” To us, the magic ratio of 60:40 is also another example of the impossible dream. In 2015, the ratio of vocational upper secondary education to general upper secondary education students was 31:69 (MOE 2016). To reach the magic ratio of 60:40 by 2018, it means that the proportion of vocational education school students needs to double.
- The Thais often witness violence erupting between students in different vocational education schools. As a result, parents are worried about the safety of their children in vocational education schools, and many parents are reluctant to send their children to these schools.

- The policy to provide vocational education in general secondary education schools has not yet been fully implemented due to resistance from stakeholders and ambiguous policy direction.
- Vocational education schools, especially the private ones, are often faced with insufficient and poor-quality infrastructure, laboratories, and learning materials. This in turn may lead to poor-quality vocational education school graduates whom employers find unacceptable.
- School-industry collaborations are still limited resulting in limited opportunities for schools to access state-of-the-art technologies that are necessary for instruction in vocational schools.

External factors affecting development of vocational education in Thailand or its “threats” according to the SWOT analysis can be viewed through the lens of the PEST framework as follows:

Political Factors

- In the past, neither the Thai government nor the Ministry of Education has had clear directions and visions in human resource production and development both at the macro- and the microlevel that responded well to the national economic and social development plans. Both public and private vocational education schools and colleges produced vocational education graduates under ambiguous long-term visions and directions.
- The government has not yet revised relevant laws and regulations in order to facilitate flexible and efficient instruction in vocational schools.
- The Thai government has not yet provided sufficient funding to support its strategic vision to reach the magic ratio 60:40.
- The per student subsidy by the government led to a so-called “war” for students between general secondary education schools and vocational education schools in attracting as many students as possible.

Economic Factors

- Although the private sector is now more engaged in vocational education provision, they do not take part actively in establishing clear directions for the vocational education labor market in terms of wages and remuneration.
- Wages of laborers with a certificate in vocational education are higher than their general upper secondary education counterparts. However, if students continue their study until a bachelor’s degree before entering the labor market, they will get much higher wages. As a result, the majority of students prefer to study general education as a direct pathway to a university.
- Although qualified and approved vocational education institutes are allowed to provide vocational education at the bachelor’s degree level, the Thai labor market needs vocational education school leavers with certificates in vocational education rather than diplomas in vocational education or bachelor’s degrees due to the limited financial capacity of establishments to hire higher-wage workers.
- Although members of the private sector are now increasingly participating in vocational education provision, such practice is not yet adequately widespread.

- The possibility to enlarge the scale of dual vocational education is limited, especially in provincial areas. Companies that have the capacity to accept vocational school students are centered primarily in Bangkok and larger cities.

Sociocultural Factors

- The educational and career counseling services in lower secondary education schools are not effective. Having known little about vocational education and future careers, students feel unconfident to pursue the vocational education track at the upper secondary education level.
- It is difficult to change values or decrease the demand for university degrees in Thai society as it is related to strong cultural roots related to protecting one's face and education is seen as a way to climb up the social ladder in Thai society (Dore 1976; Fry 1981). Many students and parents perceive that vocational education is for manual workers, low academic achievers, and economically challenged students.

Technological Factors

- Thailand cannot respond adequately to the demands of globalization and a knowledge-based economy due to outdated and irrelevant human resource development programs. A key reason is the absence of close cooperation between the trainers and users of laborers.

7.4 A Blueprint for the Future of Thai Vocational Education

Thailand can no longer remain complacent. The country needs to boost urgently economic expansion and maintain its competitiveness as an attractive place for international direct investment. To do so, Thailand needs to upgrade the quality of its workforce and establish itself as a skilled and competency-based country. One mandatory requirement in this process is to develop clear visions for vocational education. Inconsistent policies as found before in the establishment of the four specialized vocational institutes in 2011 should not happen again (*Khaosod* 2011).

The most urgent need is to improve the “quality” of vocational education students both at the certificate and the diploma level by, for example, revising relevant laws and regulations. Four hundred twenty-one private vocational education institutions, which are currently under the jurisdiction of the Office of the Private Education Commission, should be moved to be under the Office of the Vocational Education Commission similar to public vocational schools in order to promote unity in policy and implementation. In the past, private vocational schools and colleges have usually faced a shortage of instructional materials leading to the unsatisfactory quality of their graduates. More resources and budgets should be allocated to vocational education sufficiently and constantly, and such resources and budgets should be utilized transparently. No corruption in vocational education should be tolerated (*Thaipost* 2011).

In addition, vocational education should become more internationalized by promoting teacher and student exchanges with vocational education institutes abroad in countries known for their quality vocational training such as Germany, Japan, and Singapore. International experts should be invited to teach and provide instructional guidance in Thai vocational education schools and colleges. High-quality teachers should be prepared to replace the soon-to-be-retired teachers.

In terms of “quantity” development, the ratio between vocational education students and general education students at the upper secondary education level should reach at least 50:50 within 5 years, and the increment should occur in the increasingly important science and technology fields of study. More science-based technology vocational colleges should be established in order to solve the shortage of semi-skilled workers in the science and technology fields (see Chap. 17). More scholarships should be provided to underprivileged students and to support those who demonstrate a willingness to study in fields that are in urgent need.

“Relevance” to the labor market cannot be achieved unless the private industrial and manufacturing sector plays more active roles in vocational education provision and labor market reform (Jomphong 2009). Thailand Vocational Qualifications (TVQ) should be put into real practice and should cover all occupations, especially those that are in great demand by the labor market (Jomphong 2010, 2014). Students should have more opportunities to do internships or to engage in dual vocational education. Furthermore, through interviews with employers and representatives of the industrial sectors for our research projects related to vocational education, users of vocational education school graduates emphasized moral attributes of graduates such as perseverance, persistence, self-discipline, work ethic, and self-esteem, as well as their knowledge and skills. Vocational education students should be equipped with sufficient other language skills such as English, creative thinking skills, and analytical thinking skills in order to increase their employability in the new AEC era.

Finally, substantial resistance to the provision of vocational education in general secondary education schools has been noticed due to the complicated management of vocational education and the availability of abundant vocational schools (*Thai Rath* 2011). However, we insist that this policy of integrating more vocational training into general education should be seriously implemented. The education reform of 1978 had once emphasized a self-contained or comprehensive secondary education. At that time, Thailand could not provide enough higher education opportunities for all qualified candidates. The university entrance examination was highly competitive, and those who could not gain university places had not been equipped with sufficient vocational knowledge and skills to enter the labor market as their training had been oriented toward academic skills. As a result, secondary education should have provided students with vocational skills as well as academic skills and should not have been considered merely as a path to university (World Bank 1989).

In the last decade, this policy had been modified and implemented again but with some additional rationales and practices. The Thai government realizes that there are many students in the rural areas who need vocational education, but they cannot afford to study in this field because most of the vocational education institutions are

mainly located in the cities. Therefore, the Office of Basic Education Commission and the Office of Vocational Education Commission signed an agreement to support the development of vocational education in rural secondary schools. Cooperation can be in various forms; namely, (1) students enroll in vocational schools, but teaching and learning processes are carried out at secondary schools with collaboration between vocational and general secondary education schools; (2) vocational schools provide consultants, guidelines, and any other assistance to general secondary schools to offer vocational education programs in general secondary education schools with their own resources; and (3) secondary schools that have qualified staff and equipment can provide vocational secondary education by themselves independently (Siripan et al. 2012). This represents a sound policy considering that many parents are reluctant to send their children to vocational education schools directly due to their worries about their children's safety. Since 2012 "secondary career education" has been promoted by the Office of Basic Education Commission as part of secondary education. The curriculum of secondary career education B.E. 2012 consists of 45% core curriculum, (2) 45% competency-based curriculum, and (3) 10% learner development activities (*Daily News* 2011).

To conclude, there is still a long way to go if we want to see well-accepted high-quality vocational education that can serve as an engine of growth and prosperity for Thailand. Fortunately, various radical and positive changes in Thai vocational education have occurred at a much faster rate than changes in the values and attitudes of Thai people toward vocational education.

At a meeting (January 2016) on the future of Thai education held by the Quality Learning Foundation, Thailand Research Fund, and education reform associations from 14 provinces, the Deputy Director General of Research at Dhurakij Pundit University (DPU), Dr. Kiatanan Ruankaew, shared an alarming World Bank report indicating that Thailand faced the most serious shortage of skilled labor among ASEAN countries (*The Nation* 2016). The report claimed that 83.5% of the Thai workforce were unskilled and that only 38.8% were in suitable positions. There are two issues, however, with this report. One is that the research appears dated and second how "unskilled" is being defined. The latest second quarter labor survey (2015) indicates that 47% of the labor force had only primary education or lower lending support to the claims made in the WB report. These data also support Dr. Krissanapong's (former Deputy Minister of Education and former president of KMIT-Thonburi) deep concern that Thailand is not investing enough resources to improve human resource development and enhance the skills of its *existing workforce*.

Actually as with Thai education in general and in reality, this is a "tale of two cities." Clearly a significant segment of the labor force is unskilled, while another segment has good or even outstanding skills. Professor Gerald W. Fry in November 2011 interviewed the CEO in charge of the Mercedes-Benz factory in Thailand, Dr. Alexander Paufler, and he claimed that the Thai workers at his factory in Thailand were second only to those in Germany in terms of their skills and quality. His views seem consistent with Rayong having become the "Detroit of Asia." Rayong now has one of the highest incomes per capita of any province in the country reflective of the

skills and productivity of workers there (Jomphong 2010). Thailand's automotive industry is now the world's 12th largest, just ahead of the United Kingdom (Oxford Business Group 2016). But Rayong is obviously not Isan (the Northeast) or other rural parts of Thailand. Also institutions such as the Thai-Nichi Institute of Technology (NIT), German-supported vocational education (e.g., the German-Thai Dual Excellence Education (GTDEE) program), and Don Bosco schools all have good reputations for producing highly skilled workers and technicians.

In looking at contemporary issues such as vocational-technical education, we often are myopic and too ahistorical. Over 200 years ago, skilled Siamese artisans built the Temple of the Emerald Buddha and the Grand Palace (Subhadradis 1982). With no modern technology at all, these craftsmen produced a magnificent person-made wonder of the world. This historical accomplishment suggests the great potential of the Thais as skilled workers.

To conclude, if the data in the WB report mentioned above are indeed found to be accurate, then Thailand faces a serious crisis in meeting the challenges of the AEC era which began at the end of 2015 and escaping the "middle-income" trap. Collective efforts from all parts of Thai society must then be devoted to the development of *quality vocational education*, if the slogan "vocational education for nation building" is to become a living reality.

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