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AUTHOR Lee, Lung-Sheng
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ABSTRACT

Vocational training (VT) in Taiwan is categorized into public training (PT) and enterprise training (ET). PT is provided primarily by 13 PT centers, and ET is provided in various ways. A review of the state of VT in Taiwan established that VT policies and practices are being influenced by increasing emphasis on the knowledge-based economy and government efforts to maintain low unemployment rates. The following are among eight trends in VT in Taiwan that were identified: (1) focusing on training enough knowledge workers; (2) addressing the need to close gaps between skills needed in the workplace and skills being developed in VT programs; (3) developing a more highly skilled work force; (4) increasing labor market participation among women and disadvantaged groups; (5) seeking a more flexible, more cost-effective VT delivery system; and (6) decentralizing management of the VT system. The following were among 11 issues identified as facing Taiwan's VT system: (1) moving PT systems from a supply-driven to a demand-driven mode; (2) improving employers' regard for skill certificates; and (3) adopting common VT policies and measures for all age groups. (The bibliography contains 25 references. A map showing the locations of Taiwan's public training institutions and employment service agencies is appended.) (MN)

Trends and Issues in Vocational Training in the Republic of China on Taiwan

Lung-Sheng Lee
Professor & Department Chair
Department of Industrial Technology Education
National Taiwan Normal University

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Running head: VOCATIONAL TRAINING IN TAIWAN

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Abstract

Vocational training in Taiwan, R.O.C. is categorized into public training (PT) and enterprise training (ET). PT is mainly provided by 13 PT centers, and ET is provided through various ways. In addition, skill testing and employment services are expected to integrate with vocational training. Vocational training in Taiwan is facing at least three contextual impacts: (1) Economic development emphasizes the knowledge-based economy; (2) Social development aims to maintain a low unemployment rate; (3) The educational system strengthens the technological and vocational education (TVE) system. Accordingly, the following eight trends in vocational training were identified: (1) Focusing on training enough knowledge workers; (2) Placing emphasis on consolidating the policies of employment security; (3) Addressing filling skill gaps existing between the labor market and schools; (4) Working on training a more skilled workforce, with autonomous, adaptable and polyvalent capabilities; (5) Increasing labor participation rates of women and the disadvantaged groups; (6) Seeking a more flexible delivery system; (7) Rising demand for a more efficient and more cost-effective vocational training system. (8) Initiating decentralization of the management of vocational training system. In addition, the following 11 issues in vocational training were recognized: (1) The new Vocational Training Act (VTA) should reflect a demand-driven approach; (2) Some necessary PT programs lack enrollments due to an uncertain future; (3) Some PT programs are still stuck in a supply-driven mode; (4) Many skill certificates are not valued by employers; (5) Needs assessment and effectiveness evaluation of ET are weak; (6) Current competency-based training (CBT) efforts lack sound interrelated measures; (7) More emphasis should be placed on ET to ensure responsiveness of training; (8) More social partners' commitments are needed; (9) With a concern for equity between groups of population or between regions in the society, it is unclear to what extent that the flexibility, responsiveness and decentralization of vocational training systems will be appropriate; (10) It is unknown whether the flexibility, responsiveness and decentralization of vocational training systems are only in relation to the short-term needs of the labor market or more long-term economic requirements; (11) It is necessary and possible to adopt common policies and measures in the area of education and training for all age groups.

Trends and Issues in Vocational Training in the Republic of China on Taiwan

People in Taiwan celebrate two New Years: a solar one and a lunar one. On the last day of the 20th century, thousands of local residents crowded the square in front of the Presidential Office for an overnight celebration marked by fireworks and other festivities to bring in the Year 2001. In his New Year's message on December 31, 2000, President Chen Shui-bian told people in Taiwan to be prepared for some rough times ahead with the slowing of the global economy (Chen, 2001). At the beginning of the 21st century, Taiwan established direct transportation links between her two outlying islands, Kinmen and Matsu, and counter ports in the mainland province of Fujian, such as Xiamen and Fuzhou ports. These direct transportation links across the Taiwan Strait are the first legal ones since a ban was put in place five decades ago. The re-opened shipping routes will lead to more interactions, including manpower flow, between Taiwan (i.e., ROC) and China (i.e., PRC). Also from January 1, 2001, all government employees began to work a five-day working week, while people under the jurisdiction of the Labor Standards Law started to work no more than 84 hours every two weeks. This change of working hours is expected to stimulate Taiwan employees' interests in training courses for their jobs, and boost participation in leisure activities and sports.

The Lunar New Year for 2001 just started on January 24, 2001. Around every Lunar New Year, most Taiwanese go to temples to thank the gods for their blessings and to pray to the gods for good fortune. In Taiwanese culture, the right door of a temple is called "the political minister door" ("相門" in mandarin Chinese), the left one "the military general door" ("將門" in mandarin Chinese). Thus, people usually enter temples at the right door and leave temples from the left door. In this way, people wish and are encouraged to be as good "a minister" as "a general" ("出將入相" in mandarin Chinese)—well versed in both "political strategy" and "military tactics", "inward contribution" and "outward competition", "planning" and "execution", as well as "think globally" and "act locally", etc.

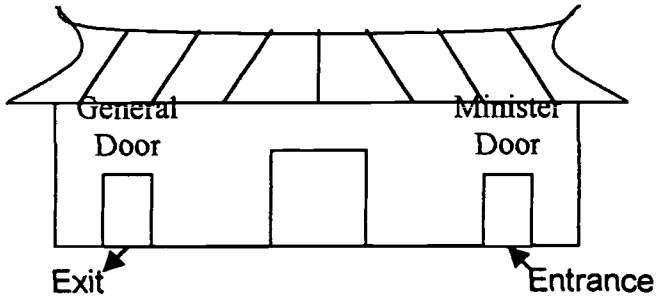


Figure 1. The entrance and exit of a traditional temple.

As an important measure of human resource development (HRD), and like people who want "to enter at the minister door and leave from the general door", the policies and programs of vocational training in Taiwan have tried to be well coordinated with policies and programs of economic and social development at the macro level as well as to meet corporate strategies at the micro level. Taiwanese like "to learn new things by reviewing old ones" or "to replace the old with the new" at the turning of every year. At the turning of the 21st century and the beginning of the lunar new year for 2001, it is a good point to explore vocational training trends and issues in Taiwan, R.O.C.

Country-specific vocational training is context-driven. An analysis of vocational training trends and issues in Taiwan is related to the vocational training system itself and its context, including the development of socio-economic status, the pattern of industrial structures, the functioning of labor markets, and the overall educational system, etc. Figure 2 indicates the above relationship.

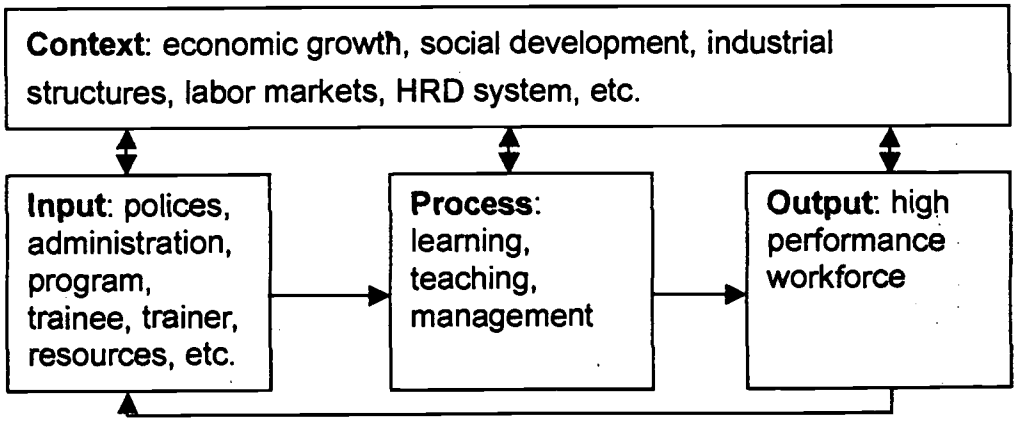


Figure 2. The context and system of nationwide vocational training.

The Context of Vocational Training is Ever-Changing

Vocational training in its context is like a basketball player in his/her team

and in a game. Every player has to effectively play a strategic role. A brief description of the "team" and "game" of vocational training in Taiwan is as follows:

Placing Emphasis on the Knowledge-Based Economy

The economic growth rates of Taiwan in 1996,1997, 1998 and 1999 were 6.1%, 6.7%, 4.6% and 5.4%, respectively. In the first half of 2000, Taiwan's exports, private investment and industrial production saw noticeable growth, in spite of some swinging in the financial sector. As a whole, Taiwan's economy is growing steadily.

The industrial structure of Taiwan has changed dynamically. From the mid-1980's, the agricultural sector's share of total domestic production of continued to decline; the industrial sector's decreased dramatically; while the service sector's increased rapidly. Although being an essential element of industry, the manufacturing sector's share slipped. It should be noted that production increased in capital-intensive manufacturing, such as the chemical and electronics industries, while that of labor-intensive ones, including the garment, bamboo and wood-product sectors, grew slowly and declined in some instance (Chinese Taipei Outline, 1997).

In order to constantly develop traditional industries as well as high-tech industries, the government has motivated the "Revitalization of Traditional Industries" and recently launched the "Knowledge-Based Economy Scheme" and newly aspirated the "Green Silicon Island Development Plan," in aiming to promote in industrial productivity and national competitiveness while placing emphasis on environmental protection and ecological conservation (Chen, 2000). The government is seeking to transform Taiwan into a knowledge-based economy and is targeting the following four important sectors for development: multimedia, biotechnology and pharmaceuticals, integrated chip systems, and industrial design.

According to a research study done by the Council of Labor Affairs (CLA) (2000e), crucial factors which affect the current and future labor market include liberalization, knowledge economy, information technology, development of the service sector, and flexible manpower utilization. To minimize the negative impact of these factors, the study suggested that the government should promote training/education and employment skills. It recommends that the government should give weight to skill training and upgrade educational and technological levels to increase national competitiveness. Furthermore it should provide access to employment information and form an employment service system; local employment services will be mandated to private

enterprises under the supervision of public employment institutions. In addition, these institutions should subsidize the employment services for disadvantaged workers.

Aiming to Maintain a Low Unemployment Rate

The economic growth in Taiwan over the past five decades has been powered by a well-educated and hard-working workforce, one which currently consists of roughly 9.8 million people of whom approximately two thirds are paid workers. With a comparatively low unemployment rate (see Table 1), good pay, decent working hours, and attractive year-end bonuses, Taiwan's workforce has given it a lead in science and technology and a competitive edge in high value-added manufacturing (GIO, 2000).

Labor demand is derived from the demand for production. The labor market has changed as a result of shifts in production. Based on the changes to the industrial structure mentioned earlier, from the mid-1980's the agricultural sector's share of total employment dropped steadily; the industrial sector's decreased dramatically; while the service sector's increased rapidly. The manufacturing sector's has also slipped steadily. Employment grew in capital-intensive manufacturing, while that in labor-intensive ones declined. It shows that as capital- and technology-intensive manufacturing expand their scale of production their demand for workers increase. In contrast, as labor-intensive industries shrink their labor requirements are declining (Chinese Taipei Outline, 1997).

Table 1. Some workforce indicators.

		Years				
		1996	1997	1998	1999	2000*
Labor Participation Rate (%)	Total	58.4	58.3	58.0	57.9	57.9
	Male	71.1	71.1	70.6	69.9	69.2
	Female	45.8	45.6	45.6	46.0	46.0
Employment (10,000 persons)		907	918	929	939	954.9
Employment Structure (%)	Agriculture	10.1	9.6	8.9	8.3	7.5
	Industry	37.5	38.2	37.9	37.2	37.2
	Service	52.4	52.2	53.2	54.5	55.3
Unemployment (10,000 persons)		24.2	25.6	25.7	28.3	32.3
Unemployment Rate (%)		2.60	2.72	2.69	2.92	3.27
Annual Increase Rate of Workforce Productivity in Manufacturing Sectors (%)		5.42	6.96	4.42	7.05	0.8**

Note: * As in December 2000; ** As in November 2000.
Source: DGBASEY, 2001.

Recently, Taiwan's unemployment rate has been growing. The recent increase in the number of unemployed was mostly because of plant-closings, business downsizing and the loss of seasonal/temporary jobs (CLA, 2001). Statistics, issued by the Directorate-General of Budget, Accounting and Statistics, Executive Yuan (DGBASEY), show that of the total unemployed the unemployment rate of low-skilled workers, which include machine operators and manual workers, topped all types. It indicates that business entities are eager to employ a skilled workforce (see Table 2). As a result, low-skilled workers are being left behind in Taiwan's continuing economic development. The statistics show that the higher the educational attainments, the lower the employment rate (CLA, 2000d), which probably negatively impact on the goal of social inclusivity, which places emphasis on fundamental values in society—equity, justice, gender equality, non-discrimination, social responsibility, and participation (ILO, 2000b).

Table 2. Labor shortage in Taiwan.

Categories	Years				
	1996	1997	1998	1999	2000*
Manufacturing	98,180	102,775	99,838	97,476	97,814
Construction	15,802	16,150	16,138	15,076	14,946
Retail, wholesale & catering	47,285	42,031	42,638	41,792	43,613
Finance, insurance & real estate	20,042	19,753	23,772	22,662	22,347
Business service	2,717	1,249	1,367	2,016	3,043
Social and personal service	15,324	13,489	14,562	14,325	14,508
Total	205,526	200,076	202,207	196,967	199,746

Note: * As in the first quarter.
Source: CLA, 2001c.

A survey of middle-aged and older workers (aged 45-64) conducted by CLA reveals that many middle-aged and older workers feel insecure about their jobs mostly because many employers find it difficult to provide the employee retirement system regulated in the "Labor Standards Law and the Labor Insurance Statute" (CLA, 2000a). It is apparent that middle- aged and older workers not only tend to be laid off but also have difficulty finding jobs again once becoming unemployed.

Taiwan is seeking to enter the WTO (World Trade Organization). The Council of Economic Planning and Development (CEPD) estimated that after joining the WTO Taiwan would experience a short-term rise in unemployment due to the transformation of the industrial structure. During the first year after entering the WTO, an increase of 0.22% in the unemployment rate is predicted. If responsive measures are accelerated, the problem of unemployment may be brought under control. With proper industrial adjustment and skill adaptation of the unemployed, structural unemployment will be overcome gradually (CLA, 2000e).

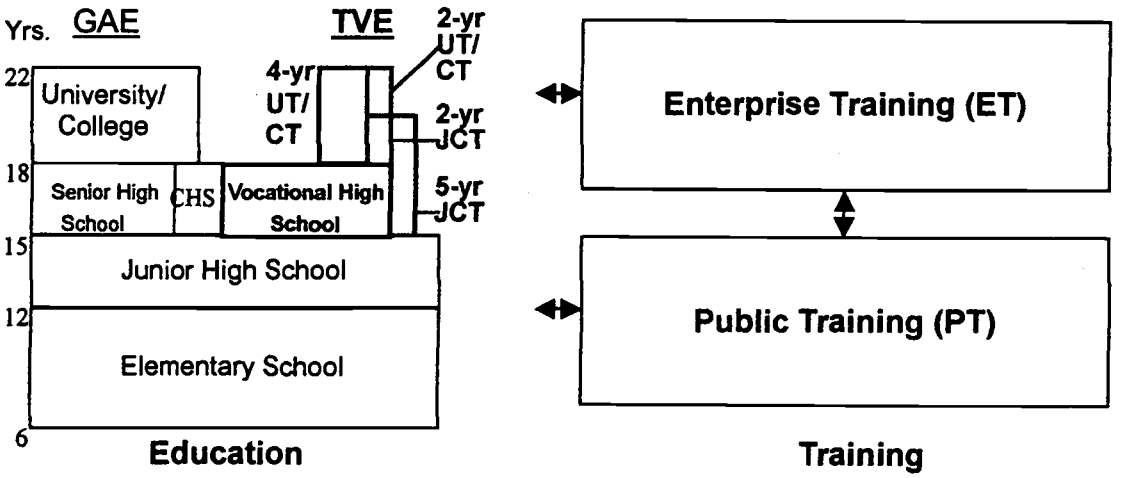
Strengthening Technological and Vocational Education (TVE)

Like an individual's two legs which need to be well coordinated to be able to march, education and training have emerged as the two key means for developing human resources. In some cases, vocational training covers vocational education and training (VET). "Education is long-term training while training short-term education" is oversimplified but meaningful. In Taiwan, the vocational-technical education (VTE), spanning both secondary- and higher education levels, is called technological and vocational education (TVE). TVE

in Taiwan is connected with, but parallel to, the vocational training system. It has nurtured a great deal of the workforce in technology and management. Nationwide TVE in Taiwan is administered by the Ministry of Education (MOE), while the authoritative institution of vocational training is the Employment and Vocational Training Administration (EVTA), affiliated to the Council of Labor Affairs (CAL).

As shown in Figure 3, the schooling system in Taiwan has two tracks beyond the nine years of compulsory education: General Academic Education (GAE: three-year senior high school/comprehensive high school → four-year university/college), and TVE. TVE has three levels: three-year vocational high schools (VHS's, including vocational programs provided by all comprehensive high schools and some senior high schools), five-year and two-year junior colleges of technology (JCT's), and four-year and two-year universities/colleges of technology (UT's/CT's). In addition to entering job markets, graduates from TVE have the following two main pathways:

1. Three-year VHS → four-year UT/CT or two-year JCT;
2. Five-year or two-year JCT → two-year UT/CT.



Legend: CHS: comprehensive high school CT: college of technology
GAE: general academic education JCT: junior college of technology
TVE: technological and vocational UT: university of technology education
Yr: year Yrs: years

Figure 3. The educational and training systems in Taiwan.

Compared to VET systems in other countries, TVE in Taiwan has the two following two characteristics:

1. It is a complete and strong system.

For the 1999-2000 academic year (from August 1, 1999 to July 31, 2000), there were a total of 1,034,289 TVE students, accounting for 57.7% of the total number of students at both upper-secondary and higher education levels (DTVE, 2000).

2. The majority of students are in private institutes.

For the 1999-2000 academic year, there were about 61.6% of vocational-high-school students and around 86.6% of junior-college-of-technology students in private institutes.

Thus, TVE in Taiwan has the following typology: aims to prepare students for both job-training and further study, emphasizes on market demands, has a relatively wide range of programs, is offered in public and private institutes, needs stronger social partners' (e.g., company, trade union, employer association) commitments.

In recent years, because of the implementation of a policy aimed at enhancing school students' basic skills and increasing participation in higher education, more and more VHS's have transformed to CHS's and more and more JCT's to degree-awarding UT's/CT's. As a result, the number of VHS students will decrease while the number of UT/CT students will substantially increase. That is to say, upper-secondary TVE institutes are horizontally transforming, such as downsizing resulting from changing themselves to CHS's, and post-secondary TVE institutes are vertically upgrading (see Figure 4).

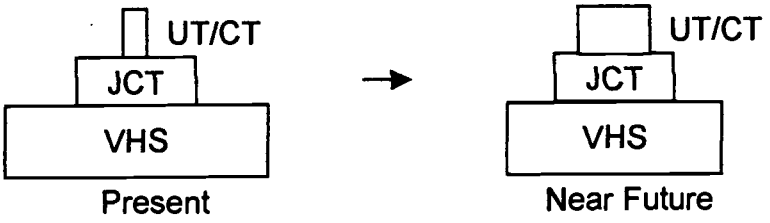


Figure 4. The three levels of TVE students will become more even.

Lifelong learning is valued in Taiwan. Almost all Taiwanese highly cherish education and formal education diplomas. Accompanying the transformation and upgrading of TVE institutes, more and more further/continuing education as well as recurrent education and training programs are provided by TVE and GAE institutes. This indicates that TVE and GAE institutes have increasingly offered vocational training programs.

Vocational Training is Diversified

During 1972-1975, Taiwan implemented the "Vocational Training Funding Regulation" to formally acknowledge enterprise's responsibility for the training of the workforce. Although the regulation was revoked as a result of the oil crisis, enterprise was already gradually accustoming itself to the concept of workforce training and development. The "Vocational Training Act" (VTA) was introduced in 1983. It specified that "initial training" referred to the training for those persons with little or no previous work experience and "further training" for those persons engaged in an occupation. A newer provision "Promoting Industry Regulation," introduced in 1990, allowed that expenditure on personnel training could result in tax deductions for enterprises (Lee & Chen, 1998).

Vocational Training is Categorized into PT and ET

Since being established in 1981, the EVTA has been the central authority for vocational training, skill testing, and employment services to develop skilled manpower, to upgrade manpower quality, to adjust manpower supply and demand, to promote full employment, and to establish an occupational certificate system (see Figure 4) (Lin, 1999). In addition to starting to administrate foreign labor affairs in the 1990's, vocational training, skill testing and employment services have been the three administrative domains of the EVTA.

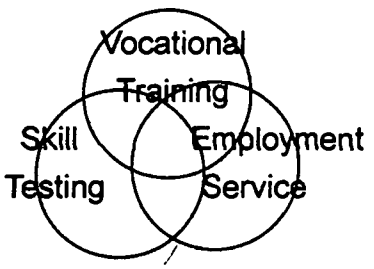


Figure 4. Three administrative domains of the EVTA.

The EVTA classifies vocational training in Taiwan into two categories: public training (PT) and enterprise training (ET) (see Figure 3). PT refers to training that is offered by vocational training institutes open to the public and funded by the government to train workers for paid or self-employed jobs. Also called in-business training, firm-level training, etc., ET refers to training that is offered by employers and places emphasis on personal, team/community and organizational learning.

The VTA specified five types of program. The relationship between program types and training categories is shown in Table 3. Any individual who

is aged 15 years or over or a junior-high-school graduate may enroll in pre-service training programs. Pre-service training completers will be assisted to obtain employment by the government. Those who are currently employed can sign up for a variety of continuing or job-transfer training programs in accordance with their needs. For the enrollees in pre-service or job-transfer training programs, expenses including tuition, miscellaneous expenses, supplies and materials, and insurance are borne by the government. However, trainees such as the disabled, indigenous, and low-income trainees can receive full financial support from the government, including boarding expenses (EVTA, 1999). Apart from the five types of program, various vocational training programs have also been implemented targeting women participating and returning to the labor market, the middle-aged and elderly, and servicemen who have left military. In addition, assistance is being made available to the local governments for implementing vocational training (Huang, 1997).

Table 3. The relationship between program types and training categories.

Program Types	Program Lengths	Training Categories	
		PT	ET
1.Pre-service training	3 years, 1 year or 6 months	X	X
2. Apprenticeship training	Over 2 years		X
3. Continuing training	flexible	X	X
4. Job-transfer training	flexible	X	X
5. Training for the disabled	flexible	X	X

PT is Mainly Provided by 13 PT Centers

There are 13 PT centers affiliated to the EVTA and other government bodies/NGO's (non-governmental organizations) (see Appendix), providing a total of more than 8,000 training slots encompassing over 100 different occupations, such as wood working, metal processing, automotive maintenance and repair, electrical engineering, electronics, construction, printing, information technology, and service industries. Figure 4 shows the number of trainees completing PT programs during 1994-1999. On average, more than 25,385 individuals take advantage of this training annually, approximately 60% of them attend evening programs (EVTA, 1999). For the disabled, a total of 31 public and private vocational training institutions provide classes in practical skills to help disabled people lead independent lives (GIO,

2000).

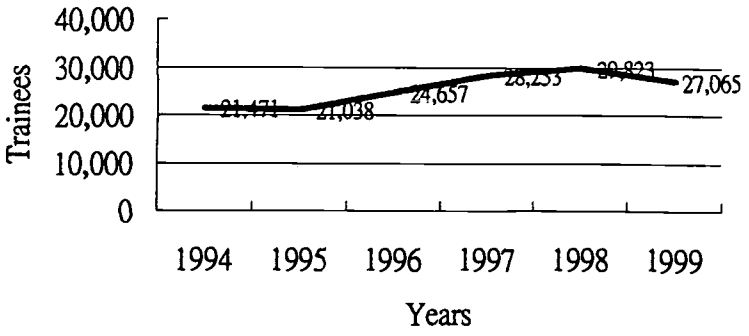


Figure 4. The number of trainees completing PT programs.

For many years, Taiwan has responded to the requirements of the international community by sharing with it her development experience and achievements. During 1962-1995, Taiwan offered vocational training programs in agriculture, land reform, industrial techniques, trade, development of small and medium enterprises, taxation, customs, as well as science and technology to approximately 7,500 trainees from 80 countries (GIO, 2000). The "Overseas Vocational Training Technical Cooperation Plan of the R.O.C.," which was drawn up in 1990, had benefited 54 countries as of 1999. The plan has been spread throughout Latin America, Caribbean Ocean Areas, Africa, Western and Southern Asia, Asian Pacific areas and Europe (CLA, 2000b).

ET is Provided Through Various Ways

ET raises company productivity. Its institutions in Taiwan are various. They mainly include company undertakings, employers associations, trade unions, professional educational training and academic research institutions/groups, public vocational training institutions, and universities/colleges/schools. Many large enterprises in Taiwan have training and development (T&D) departments to conduct ET. In the case of small and medium enterprises, the government has been assisting employers and trade unions to pool the strength of firms in particular fields and establish training centers offering various training activities. Science-based industrial parks, where many of Taiwan's semi-conductor manufacturers are located, are an example of what can be achieved with the training commitment of some companies. In addition to this, the government has also established ET service teams and networking to provide the business sector with technical services, subsidies, tax exemptions, information, and other incentives (EVTA, 1999). The apprenticeship training program, shown in Table 3, is a type of cooperative (co-op) education or training which is offered

by schools in collaboration with industrial entities or with vocational training centers.

When conducting ET, many corporations offer their employees on-the-job training (OJT) programs. In 1998, approximately 197,000 workers received OJT conducted either by corporations or training institutes operating under government contracts. In 1998, the CLA assisted private enterprises in setting up a total of 46 vocational training centers. In addition, the CLA held courses to train supervisors and technical personnel for public and private institutions, and completed training for 17,852 workers in the same year. The CLA also offered vocational training to 160 foreign workers employed by investors based overseas (EVTA, 1999). Since 1997, a central-level ET advisory committee has been maintained in the CLA to help the promotion of national-wide ET.

Skill Testing and Employment Services are Expected to Integrate with Vocational Training

Skill testing and employment services are expected to be integrated with, and be complementary to, vocational training. As a qualification measure and administered by the EVTA, skill testing has more than 160 occupational categories and is classified as A, B, and C levels. Examinees who pass are issued certificates designating the level of expertise attained. More than 1.4 million certificates have been issued. In addition to skill testing, a nationwide vocational training competition is held. In 1998, a total of 638 workers from 39 different occupations participated in the 29th National Vocational Training Competition (EVTA, 1999).

As shown in Appendix, Taiwan has a total of seven employment service centers, 33 branch offices, and nine district offices providing free placement, occupational psychological testing, and employment consulting to job seekers, as well as needed workers and labor market information to employers (EVTA, 1999). Government-owned banks have been asked to provide starter loans to help young trainees start up their own business.

In addition, according to the "Rules for the Implementation of Unemployment Benefits under the Labor Insurance Program," introduced in 1998, after leaving their job, the insured persons shall bring their certificate of service with them and apply in person to the public employment service institutions to register as a job seeker and to obtain an unemployment certificate. After receiving these applications, the public employment service institutions shall refer and recommend employment or arrange vocational training programs for the applicants within 15 days after being registered as job seekers (GIO, 2000).

The CLA (2000f) recently announced the following three measures regarding vocational training and employment services:

1. Continue the current "Strengthening Software Training Program," and the "Technology Manpower Training and Utilization Program."
   The two current programs train 15,000 hi-tech employees each year.
2. Utilize non-governmental entities to supplement the government training programs.
   The CLA is pondering feasible ways to cooperate with employment agencies, colleges, and professional groups to undertake OJT knowledge-based training and to jointly carry out basic computer training for low-skilled workers from the private sector.
3. Advance the efficiency and effectiveness of employment services and job matching for hi-tech employees.
   The CLA promised to integrate multiple employment service media and continue the current measure of job-match allowances to facilitate more successful matches.

The CLA also urged that the policies of employment security and practice must be well prepared before Taiwan joins the WTO. The future policies should at least cover the following aspects: promotion of training/ education and employment skills, access to employment information, formation of an employment service system, modification of labor-management statutes and regulations, assistance provided for disadvantaged groups, and integration/coordination of all employment promotion programs (CLA, 2000e).

Trends in Vocational Training: Seeking More Productive and Demand-Driven Systems

Considered as developmental directions, trends have two interrelated aspects—factual (i.e., "to be") and ideal (i.e., "ought to be") aspects. Factual and ideal trends in vocational training in Taiwan are presented as follows:

1. Focusing on training enough knowledge workers.
   "Recent history demonstrates that the competitive economic advantages of the tiger (Taiwan, South Korea, Hong Kong and Singapore) and tiger cub (Malaysia, Thailand, Philippines) economies have declined as salaries and commercial real estate soared" (Davies, 2000). In the new-century global economy, Taiwan has to concentrate on high value-added products and increasingly focus on services, leaving the mass production of low-cost goods to other countries where wages are comparatively low. The government has launched the "Knowledge-Based Economy Scheme." In

addition, the CLA estimates that Taiwan will still be facing a shortage of hi-tech workers in the near future. Higher education graduates with humanities degrees or limited technical backgrounds are increasingly finding it necessary to acquire advanced training in computing, multimedia applications and specialized software. The Taiwan Institute for the Information Industry points out that the demand for information-technology training has increased (The British Council, 1999). All the above lead to the trend that a new focus of vocational training is to train enough workers for developing the knowledge-based economy.

2. Placing emphasis on consolidating the policies of employment security.
   The domestic unemployment rate of Taiwan soared recently. To help individuals attain full employment is becoming a new emphasis for vocational training. For example, the CLA started a new training program which features short-term and small-class training able to commence as soon as 10 trainees enroll. The EVTA also launched a vocational training voucher system to help involuntarily unemployed people receive needed training. The involuntarily unemployed can join training programs held by public training institutions, or participate in private training programs with vouchers (CLA, 2000g).
3. Addressing filling skill gaps existing between the labor market and school.
   Formal education in Taiwan has increasingly prospered. A considerable growth of participation in post-compulsory and higher education has taken place in Taiwan. Education and training in Taiwan need to work together to train individuals to get "high-skill and high-wage" jobs. In addition to improving school curricula to strengthen graduates' employability, vocational training will and should address filling the skill gaps existing between the labor market (demand-side) and school (supply-side).
4. Working on training a more skilled workforce, with autonomous, adaptable and polyvalent capabilities.
   In Taiwan, blue-collar workers are being replaced by knowledge workers (i.e., golden-collar workers), who may be featured as those who: demonstrate technical or/and managerial specialty; can analyze, synthesize, and evaluate information and use that information to solve problems of variable content; are highly educated, innovative, computer literate, and have portable skills that make it possible for them to move anywhere their intelligence, talent, and services are needed (Brown, 1999). PT centers in Taiwan have concentrated on occupational programs concerning a relatively narrow scope and low level. In order to cope with the changing nature of the

workforce under the impact of the globalization of work and continuing advances in technology, both PT and ET in Taiwan are working on training a more skilled workforce, with autonomous, adaptable and polyvalent capabilities.

5. Increasing labor participation rates of women and the disadvantaged groups.
   Female labor participation rates in Taiwan have not surpassed 50%, Vocational training centers have been required to effectively develop the female workforce. In conjunction with central government policy, vocational training efforts are also being made to help indigenous, elderly, and disabled people find employment.
6. Seeking a more flexible delivery system.
   In order to meet the changing needs of the individual, industry and society as a whole, vocational training should be provided in the most flexible manner together with the new information and communication technology (ICT). In recent years, the EVTA has promoted competency-based training (CBT) and placed emphasis on both on-site and on-line learning to make vocational training more flexible.
7. Requiring more efficient and more cost-effective vocational training system.
   As a result of not only the impacts from prevailing information technologies, global economic competition and wide organizational changes but also the fact that government resources tend to be increasingly constrained, the vocational training system in Taiwan has been required to be more efficient and more cost-effective. More and better incentives will be offered to enterprises to take their ET responsibilities.
8. Initiating decentralization of the management of the vocational training system.
   A trend towards decentralizing the management of the vocational training system has been initiated in Taiwan. This initiation is at least based on the following reasons: (1) Many local governments want to gain more autonomy; (2) The overall resources of the central budget have increasingly been inadequate; local government should raise some money to satisfy local demands for vocational training; (3) Some degree of decentralization is one of the ways to achieve flexibility and responsiveness of vocational training systems (Bertrand, 1998).

To sum up, trends in vocational training in Taiwan focus on seeking more productive and demand-driven systems. These trends have resulted from the influence of and upon the various stakeholders/players: governments, employers, industrial associations, trade unions, training recipients, vocation

training institutions and trainers, schools and teachers, etc. All these trends and influences must be reflected in the VTA and its related regulations as well as programs, which are under revision.

Issues in Vocational Training: High Quality Training Should be Pursued

Issues are emerging, important and unsolved problems. A problem is a gap between the ideal and the real. Thus, the idea should be identified first. The "Conclusions Concerning Human Resources Training and Development" (ILO, 2000a), made by the Committee on Human Resources Training and Development, International Labour Organization (ILO), in 2000, may serve as the main part of the ideal. The conclusions state that the critical challenge facing human society at the start of the 21st century is to attain full employment and sustained economic growth in the global economy and social inclusivity. The conclusions comprise 21 items. The following eight points of human resources training and development, recommended in Item 21, can be seen as a summary of the 21 items to some extent.

1. Address training and education needs in the modern world of work in both developing and developed countries, and promote social equity in the global economy;
2. Advance the decent work concept through defining the role of education and training;
3. Promote lifelong learning, enhance employability of the world's workers, and address the economic challenges;
4. Recognize the various responsibilities for investment and funding of education and training;
5. Promote national, regional and international qualifications frameworks which include provisions for prior learning;
6. Improve access and equity of opportunity for all workers to education and training;
7. Build the capacity of the social partners for partnerships in education and training;
8. Address the need for increased technical and financial assistance for the less advantaged countries and societies.

Comparing the above points with the trends in vocational training in Taiwan identified earlier, vocational training in Taiwan in on the right track. However, Taiwanese like to say, "Never settle for second best." Three aspects and 11 items of issues in vocational training in Taiwan can be identified as follows:

1. Issues regarding the balance between demand-side and supply-side.
   When tracking the demand-side pressures and supply-side responses of the vocational training system, at least the following critical issues may be highlighted: (1) The new VTA should reflect a demand-driven approach. (2) Some necessary PT programs lack enrollments due to an uncertain future. (3) Some PT programs are still stuck in a supply-driven mode. (4) Many skill certificates are not valued by employers. (5) Needs assessment and effectiveness evaluation of ET are weak. (6) Current CBT efforts lack sound interrelated measures (see Figure 5). (7) More emphasis should be placed on ET to ensure responsiveness of training. (8) More social partners' commitments are needed.

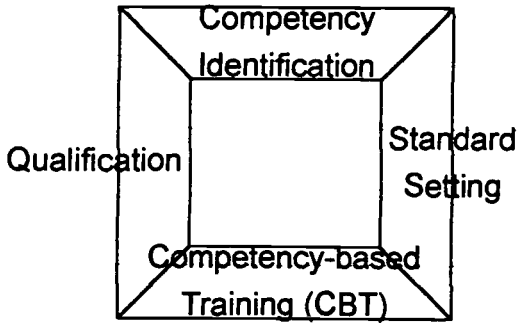


Figure 5. CBT should be geared to other measures.

2. Issues concerning the new emphasis on flexibility, responsiveness and decentralization.
   The following issues raised from the new emphasis on flexibility, responsiveness and decentralization of vocational training systems: (1) With a concern for equity between groups of population or between regions in the society, it is unclear to what extent that the flexibility, responsiveness and decentralization of vocational training systems will be appropriate; (2) It is unknown whether the flexibility, responsiveness and decentralization of vocational training systems are only in relation to the short-term needs of the labor market or more long-term economic requirements.
3. Issue related to the link between education and training.
   The issue identified is that it is necessary and possible to adopt common policies and measures in the area of education and training for all age groups.

In order to tackle the above issues, many efforts should be made by all vocational training stakeholders. This author and his colleagues (Lee, Chen,

Hsieh & Chen, 2000) proposed a management system for vocational training to solicit more input. The system is shown in Figure 6.

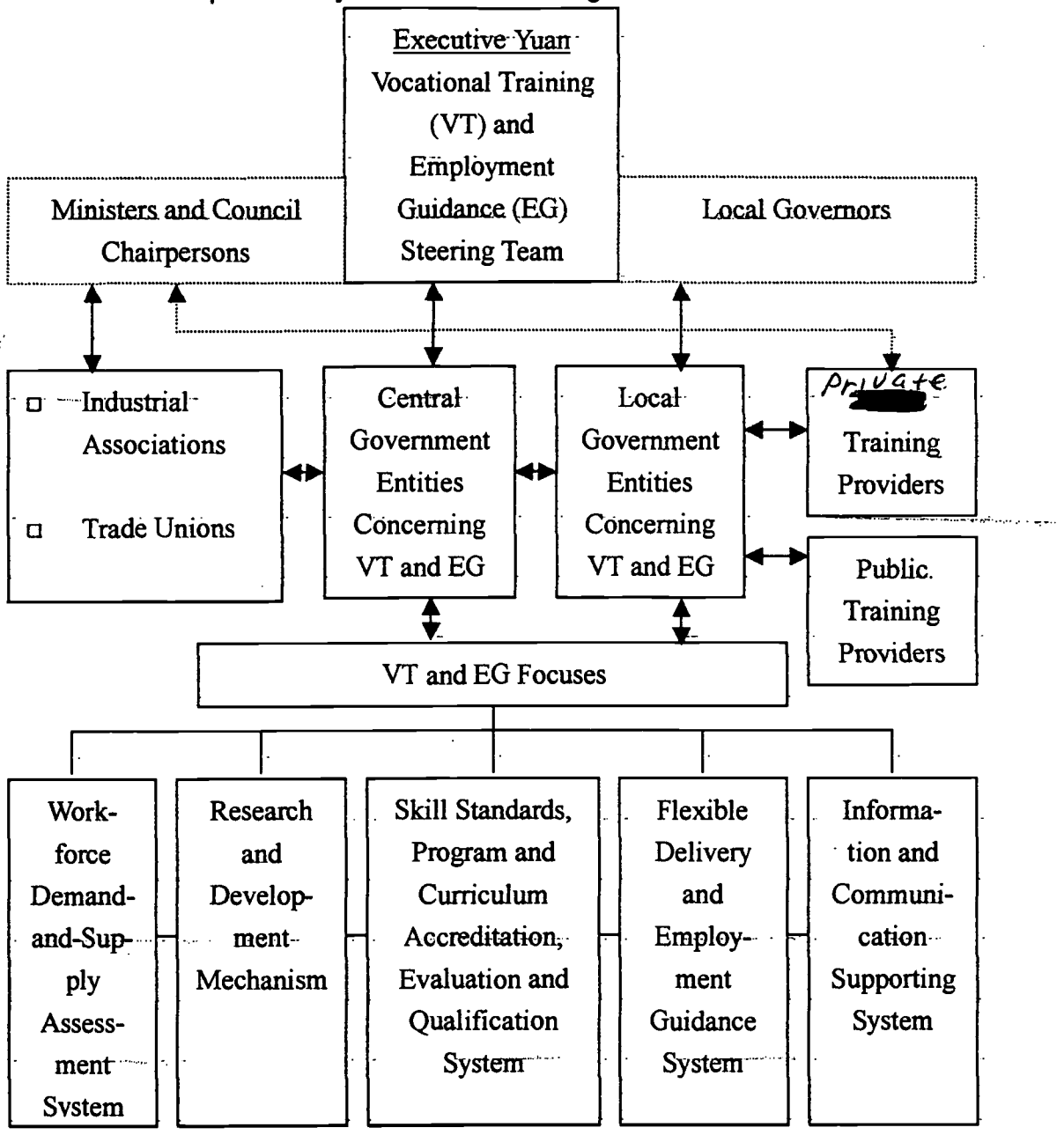


Figure 6. A proposed management system for vocational training.

To sum up, issues in any field are ever-emerging. Appropriate issue solving means progress. In order to promote the quality of vocational training in Taiwan, the current issues identified should be effectively solved.

Concluding Remarks

Taiwan's vocational training has significantly contributed to economic growth, social development and individual accomplishment for more than four

decades. However, because of the rapid-changing context and necessary system innovations, at least eight trends and 11 issues in vocational training in Taiwan can be identified in this paper. Those trends should be of concern to, and those issues should be tackled by, all stakeholders. It is wished that vocational training in Taiwan may be like those who "enter at the minister door and leave from the general door." That is, it may prepare both "managerial" and "technical" personnel, develop trainees' "soft skills," such as problem-solving, team-working skills, and "hard skills," such as programming, auto repairing", etc. On the whole, it is wished that vocational training in Taiwan may make "outward" contributions to economic growth and social development, as well as make "inward" innovation to enhance its strengths.

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Author Note

Dr. Lung-Sheng Steven Lee (李隆盛) is a professor and the Department Chairperson of the Department of Industrial Technology Education (ITE) at National Taiwan Normal University (NTNU), the secretary-general of the Industrial Technology Education Association (ITEA), Taiwan, R.O.C., and the secretary-general of the Society for Training and Development (STD), Taiwan. The NTNU-ITE (http://www.ite.ntnu.edu.tw) has provided both technology education and human resource programs in her undergraduate, master's and doctoral programs.

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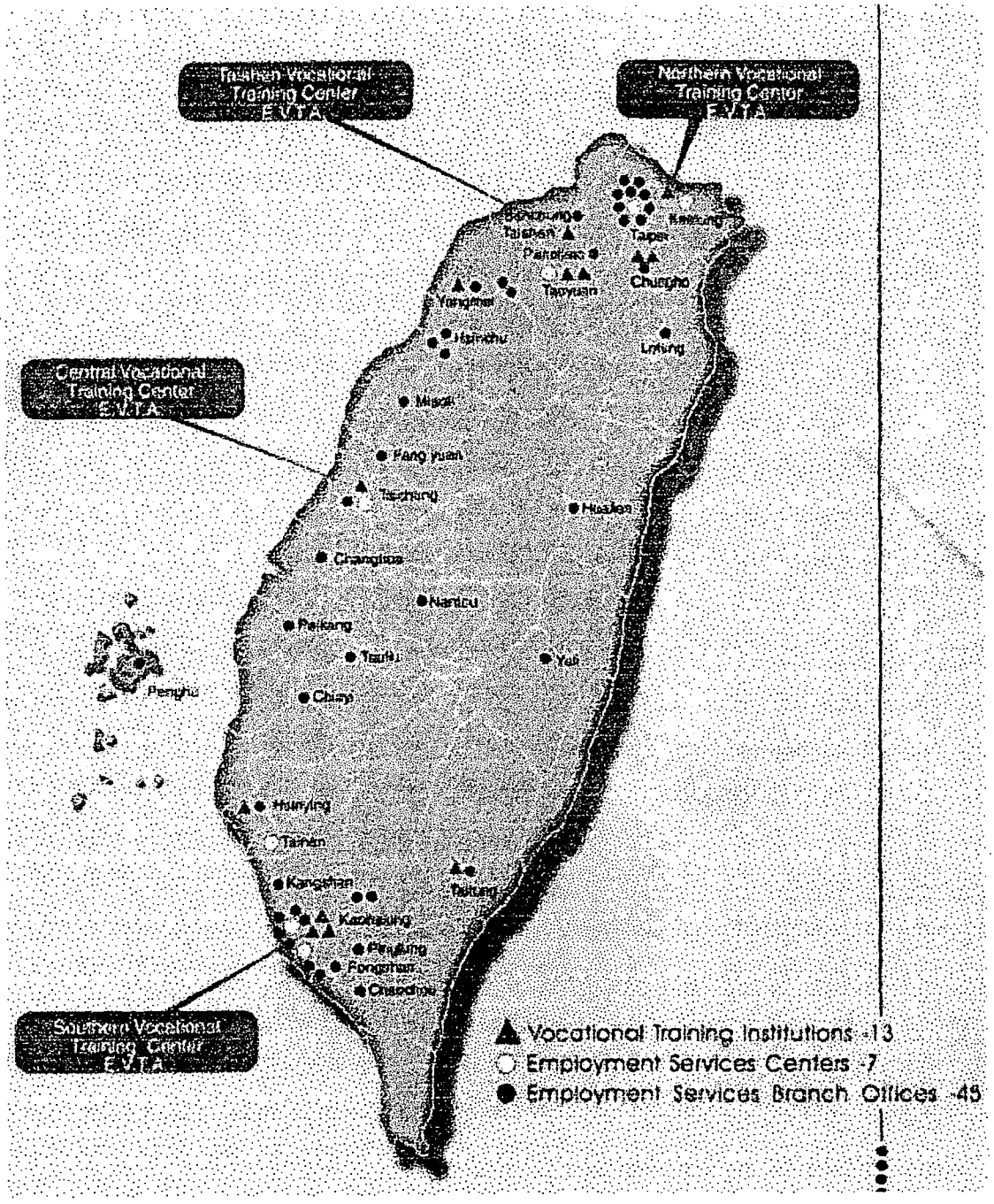
Correspondence concerning this paper should be addressed to Lung-Sheng Lee, Department of Industrial Technology Education, National Taiwan Normal University, 162 Hoping E. Rd., Sec. 1, Taipei 106, Taiwan. Electronic mail may be sent via the Internet to t83006@cc.ntnu.edu.tw.

Appendix

Location of public training institutions and employment service agencies



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