

## **A Probe into the Cooperation: Industry & School Taking Singapore's New Apprenticeship System for Instance.**

Yi-chan Lin, Chi-Cheng Chang

Taipei Municipal Nan-Kung Industrial Senior Vocational School

Tel: (02)809-1391 (02)792-4578

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1. 本報自創刊以來，承蒙各界人士之厚愛，踴躍投稿，不勝感荷。茲為擴大宣傳，特在報上增設「讀者信箱」一欄，歡迎各界人士隨時來函，提出意見或建議。本報將竭誠為您服務，並對所提問題予以解答。

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## **Abstract**

In the wake of rapid industrial transformation, the ratio of outputs yielded by the manufacturing sector has sharply come down while service and construction lines have significantly soared over the past decade. This structural transformation has prompted transformation in the entire society. In the face of the high unemployment, especially those higher educated people, the competent authorities of the government should seriously watch the problems. Unemployment higher educated people involves quite complicated issues. The key to solution of the problems lies upon connecting education, training and enterprises.

In line with the industrial and technological upgrade and techniques essential to be possessed by public, Singapore has designed the new apprenticeship system aiming at the year 2000. Their concepts, measures and features are quite worth our emulation. This thesis mainly deals with how the new apprenticeship system is implemented in Singapore, the relevant coordination and measures which will be handy referenced to the Republic of China on Taiwan when it is heavily carrying out vocational training to deal with the mounting unemployment.

Key words:

New apprenticeship system. The cooperation: Industry & school.

的。雖然，在「新學期」的課程中，我們也安排了許多與「舊學期」相同的課程，但我們認為，在「新學期」的課程中，我們應該加入一些新的課程，以反映社會的變遷。例如，我們應該加入一些有關環境保護的課程，因為環境保護是當今社會的一個重要問題。我們也應該加入一些有關資訊科技的課程，因為資訊科技是當今社會的一個重要工具。此外，我們也應該加入一些有關社會服務的課程，因為社會服務是當今社會的一個重要價值。

在「新學期」的課程中，我們也應該加入一些新的教學方法。例如，我們應該採用一些新的教學方法，以激發學生的學習興趣。我們也應該採用一些新的教學方法，以培養學生的批判性思維能力。此外，我們也應該採用一些新的教學方法，以培養學生的團隊合作能力。

在「新學期」的課程中，我們也應該加入一些新的評估方法。例如，我們應該採用一些新的評估方法，以評估學生的學習成果。我們也應該採用一些新的評估方法，以評估學生的批判性思維能力。此外，我們也應該採用一些新的評估方法，以評估學生的團隊合作能力。

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總之，在「新學期」的課程中，我們應該加入一些新的課程、新的教學方法、新的評估方法、新的教材和新的教師，以反映社會的變遷，並激發學生的學習興趣。

## **Introduction**

Singapore officially started up implementation of the apprenticeship system in 1968, only three years following its independence in 1965. The new apprenticeship system was put into enforcement in 1990 to train its nationals into required techniques in the advent of the year 2000. Fundamentally, the system derives in the dual system prevailing in Germany. To put it in more understandable terms, other than dual system features, the new apprenticeship system carries on the "master training model" as the orthodox practice in Europe.

### **How was the new apprenticeship system implemented in Singapore**

The new apprenticeship system is mainly composed of 1. The training organizations of Institute of Technical Educations, including training bodies approved by the institute of Technical Educations; 2. Enterprises and 3. Apprentices. The training is carried out in two major parts, i.e., on-the-job training (OJT) and off-the-job training (Chor, 1995).

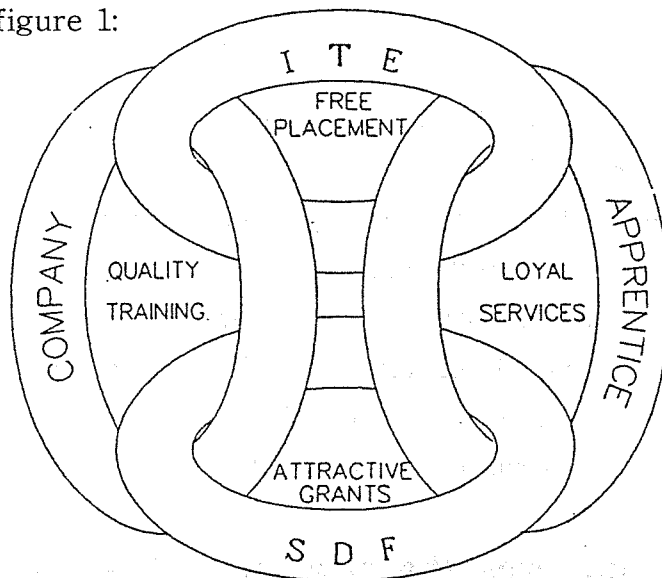
#### **1. On-the-job training (OJT):**

The on-the-job training (OJT) has long played the role as the best training tool for enterprises to meet working procedures and production technology upgrade. Under sound guidance by qualified instructors, apprentices will learn skills essential to duties. This will further cultivate into the capability of future career projecting.

#### **2. Off-the-job training:**

This type of training includes theoretical and practical courses and is imposed through full-time, day-release and block-release manners, in training centers or organizations.

3. The roles of Institute of Technical Education, employers and apprentices as figure 1:



\*ITE: Institute of Technical Education

\*SDF: Skill Development Fund

Fig.1 Linked for a better future

Source: ITE. (1992), p1.

The relationships among the Institute of Technical Education, employers and apprentices are shown as follows (Low, 1995):

- 1) The institute of Technical Education play the role of approving, supervising and authentication with primary duties as follows:
  - (1) Faithfully oversee the implementation of on-the-job training and off-the-job training.
  - (2) Confer upon successful trainees with training or technique certificates.
  - (3) Deliberate on and approve qualified apprentice training organizations and centers.
- 2) The role played by the employers:
  - (1) Provide on-the-job training to apprentices.
  - (2) Send trainees to receive two-week training in the Institute of Technical Education on training skills.

- (3) Pay necessary costs to apprentices when they receive off-the-job training.
- 3) The role played by the apprentices:
  - (1) Study hard to live up to required technique standards.
  - (2) Participate in fundamental training programs in right off-the-job training.

### **Coordinative Measures on Implementation of New Apprenticeship System**

#### **1. Possessing qualified trainers:**

The trainers' techniques and training skills are vitally important to the training quality. In the dual system, Singaporeans have set experiences of success with guidance by masters and learning by apprentices. With the improvement efforts, they consider it necessary that the trainers complete certain teaching training before they can effectively carry on, teach, assess and provide the methods of improvement. In turn, in the apprentice systems, the trainers will play the pivotal role for a success (ITE, 1992).

#### **2. Providing general and advanced training to apprentices:**

Singapore provides general education level to its nationals. This is one of its major government policies. Whenever the apprentices fail to live up to the "S4N" level, i.e., the 4th year level of high schools in English and Mathematics, their employers must finance them for "workers improvement through secondary education," known as WISE (VITB, 1990). The WISE program is intended to assure that the trainees live up to fundamental requirements in English and Mathematics, up to the GCE "N" graduation level (ITE, 1995a).

#### **3. Financial aids provided under the Technique Development Foundation:**

The funds of the Technique Development are levied from the

Skills Development Levy Act and are mainly intended to encourage development of expertise and special skills, retraining, purchase and maintenance of facilities required for training through financial aids (ITE, 1995b).

Government subsidies function as the best incentives to the apprenticeship training. The Technique Development Foundation provides various financial aids according to the categories, period of apprenticeship training, etc (Law, 1995).

4. Apprentices participating in the new apprenticeship system entitled to deferred military services:

While all Singaporeans are obliged for military services, its Ministry of National Defense approves the apprentices participating in the new apprenticeship system to defer military services to enable them to complete the required training programs (Tan, 1994).

### **Features of the New Apprenticeship System**

1. Promising career development for apprentices:

The new system substantially improves the previous practice which purely aimed at employer's needs and takes good care of apprentices' career projecting. To put it in more understandable terms, during apprenticeship training, other than technique learning, the System specifically requires the apprentices to learn English and Mathematics, notably the fundamental reading, writing and calculating comprehensions which could significantly help future learning of the new skills and get connected with other advanced and continuation education.

2. Extended occupational horizons:

The Institute of Technical Education has developed lots of apprenticeship training curricula whereunder the employers may play as role as they require. Based on special needs, the employers may



apply to the Apprentice Placement Center and then develop new apprenticeship training programs after the Institute of Technical Educations approve. This means the curricula so developed are highly flexible and living up to special needs of various lines.

3. Interrelated training programs:

The new apprenticeship system has been worked out to meet the common interests of the nation, employers and apprentices. Through utilization of the fund, the government attains the objectives to cultivate technical manpower, boost productivity and economic development. With close interactions in national & training, employers, apprentices and foundation, the system has attained the maximum benefits.

4. High incentives provided by the financial subsidies:

Utilization of financial aids is one of the magic skills of Singapore in making the new apprenticeship training system run and effectively minimizing the burdens of apprentices and employers. Such attractive incentives assure smooth operation of the system and bring up remarkable benefits to the nation.

5. Licensing to prove enhanced skills:

After Singaporeans complete various vocational skill programs and pass the off-the-job training courses, the Institute of Technical Educations will confer upon them certificates to prove their qualifications or expertise as the proof for next training programs.

6. Flexible training periods based on various lines:

Apprentices may choose training programs of varied lengths as the professions may require, ranging from one to three years in general.

7. Uniform quality of faculty:

Other than the consideration to meet the standards for the enterprises in screening, the trainers shall further receive the training

programs systematically provided by the Institute of Technical Educations, e.g., the teaching and expressing skills to enhance the trainers' capability in expression and languages. Such training system proves extremely conducive to higher faculty standards and teaching performance.

### **The Inspiration from Singapore**

The inspiration of the Singapore's New Apprenticeship System to our country could be concluded as following:

1. Strengthening the inspection function of the apprenticeship system.
2. Feasibly listing the length of time to applying apprenticeship system and content of the system.
3. Standardizing level of the knowledge and ability of applying apprenticeship system.
4. Strengthening supervisory role of helping trainee to obtain skill certification.
5. Offering Employment Welfare Fund to support trainee to attend the program.

### **Conclusion**

In the Singapore's New Apprenticeship system the role of trainer is cooperated from both the College of Industrial Education and enterprise. The trainer is educated effectively under the government conduct and inspection. The government not only establish the qualification exam to assure the trainee's ability but also inspecting how the funding is operated. This kind of training program is effectively connected by the training education with the need of enterprise. It is defiantly the ideal model of cooperation between industry and school. It is valuable to using the program to strengthen of well being of the employees.

## Referebces

- Chor, C.S. (1995). 2-Day visit programme by Messrs Lin Yin Chang and Zhang Ji Cheng on vocational training management and policy formulation Wed 5 Apr 95 to Thu 6 Apr 95 Instrtute of Technical Education. Industry-based Training (Services) Division, Singapore.
- ITE. (1992). Employer's guide on Apprenticeship, Linkde for a Better Future. Institute of Technical Education, Singapore.
- ITE. (1995a) Apprenticeship Route to a Bright Futture. Institute of Technical Education, Singapore.
- ITE. (1995b) Prospectus 1995. Part-Time Continuing Education & Training Courses. Institute of Technical Education, Singapore.
- Law,S.S. (1995). 2-Day visit programme by Messrs Lin Yin Chang and Zhang Ji Cheng on vocational training management and policy formulation Wed 5 Apr 95 to Thu 6 Apr 95 Instutute of Technical Education, Instutute of Technical Education, Singapore.
- Tan,N.C. (1994). Apprenticeship Training Singapore. Country paper for the Seminar-Workshop on management of business and industry cooperation programmes in Vocational and Technical Education (22 AUG 94-2 SEP 94), Singapore, p.10.
- VITB. (1990). The New Apprenticeship System. Press Statement, Press Release No.33/90, Embargode Till After Delivery On TUE 23 OCT 90, Singapore, p.1.