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## ABSTRACT

This conference report provides summaries of presentations of country case studies from a project to investigate factors that impinged upon the status of technical and vocational education (TVE) in Asian and Pacific countries. The report includes the case study project terms of reference, a list of delegates, and agenda. Summaries follow of the case studies from these countries: Australia (Peter Bruhn); Bangladesh (Adbur Rafique); China (Zeng Zida); Fiji (Nelson Delailomaloma); India (Arun Mishra); Indonesia (Mohamad Bakri); Japan (Muneharu Iwamoto); Republic of Korea (Taek-duck Kim); Malaysia (Hee Tieng Fok); Pakistan (S. Zaheer A. Gillani); Thailand (Siripan Choomnoon); and Vietnam (Nguyen Minh Duong). "Summary of Key Issues Identified in Country Case Studies" (Peter Bruhn) is followed by nine recommendations: strategies to innovate TVE systems to cope with changing demands of the labor market caused by national economic development; policies to promote close linkages between TVE institutions and industry; allocation and use of financial resources to support TVE; measures to improve teacher quality; efforts to include entrepreneurial orientation and skills in TVE; procedures to promote articulation between TVE and the education system; ways to improve career guidance and counseling; policies to improve the participation of special social groups in TVE; and development of TVE in the informal sector. The working group report on entrepreneurial skills for small business exemplary curriculum concludes the report. (YLB)

ED 391 018

## CASE STUDIES ON TECHNICAL AND VOCATIONAL EDUCATION IN ASIA AND THE PACIFIC

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## CONFERENCE REPORT



**UNEVOC**

International Project on Technical and Vocational Education  
Projet international pour l'enseignement technique et professionnel

**REPORT OF REGIONAL MEETING  
KUALA LUMPUR  
MALAYSIA  
12TH - 15TH DECEMBER 1994**

**CASE STUDIES ON TECHNICAL AND  
VOCATIONAL EDUCATION IN ASIA  
AND THE PACIFIC**

**EXEMPLAR CURRICULUM PROJECT  
WORKING GROUP REPORT**

*Edited by:* **Adrian R. Haas**  
*Associated UNEVOC Centre*  
*Royal Melbourne Institute of Technology*

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Associated UNEVOC Centre  
Royal Melbourne Institute of Technology  
GPO Box 2476V  
Melbourne  
Victoria  
Australia 3001  
Tel: +613 6603790  
Fax: +613 6603786

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UNEVOC is the International Project on Technical and Vocational Education which was launched by UNESCO in August 1992. In the field of technical and vocational education, UNEVOC aims to foster the international exchange of ideas, experience and studies on policy issues; strengthen national research and development capabilities; facilitate access to data bases and documentation; promote innovations in staff development; and support international cooperative actions.

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## PREFACE

The main purpose of the UNESCO UNEVOC Regional Meeting held in Kuala Lumpur, Malaysia from 12th - 15th September 1994 was to allow researchers undertaking Country Case Studies for the UNESCO UNEVOC *Case Studies on Technical and Vocational Education in Asia and the Pacific* project, and representatives of UNESCO PROAP Bangkok, to meet to discuss the Country Case Studies. The main focus of this project was investigation of factors which impinged upon the status of TVE in these countries.

Researchers from Australia, Bangladesh, China, Fiji, India, Indonesia, Japan, Republic of Korea, Malaysia, Pakistan, Thailand and Vietnam attended the Regional Meeting.

The outcome of this Regional Meeting was recommendations pertaining to possible directions to improve the status of technical and vocational education in the Asia and the Pacific Region.

These recommendations provide advice to UNESCO, which might also be of assistance to regional governments in the planning process for improvements to the technical and vocational education system in individual countries.

On the final day of the Regional Meeting, a Report was presented to Delegates by the Exemplar Curriculum Working Group which has been developing an Entrepreneurial Skills for Small Business Curriculum.

## ACKNOWLEDGMENTS

Funding for the Regional Meeting was provided by UNESCO, the Australian Department of Education, Employment and Training and the Royal Melbourne Institute of Technology.

The Technical and Vocational Education Division, of the Ministry of Education, Malaysia most courteously provided secretarial assistance to the Regional Meeting and also made the necessary arrangements for a visit by Regional Meeting Delegates to the Port Dickson Polytechnic. The Malaysian National Commission for UNESCO in the Ministry of Education kindly provided a Welcome Dinner for Regional Meeting Delegates.

Invaluable assistance and advice concerning the planning of the Regional Meeting was afforded by Mr M A Qureshi, Specialist in Technical & Vocational Education, UNESCO Principal Office for Asia and the Pacific, Bangkok.

Most travel and accommodation arrangements for Regional Meeting were handled by MSL Travel Sdn Bhd, Kuala Lumpur who were very efficient in the provision of this service. The Regional Meeting was held the Hotel Equatorial, Kuala Lumpur which provided an efficient and comfortable venue for deliberations by delegates.

## CASE STUDY ISSUES PROJECT TERMS OF REFERENCE

This project was directed at Asia and the Pacific region. The case studies undertaken by this project were based on the following terms of reference:

- (a) An analysis of the present situation
- Economic Conditions
  - Human resource development
  - The existing technical and vocational education (TVE) system (legislation, management, structures, institutions, and articulation and other elements of the education system).
- All country case studies covered this section

A forecast of the future situation ie. what the country hopes to achieve through an improved technical and vocational education system.

Ways to achieve the desired future situation by:

- Identifying the existing problems
- National policies and innovative measures to promote the further development of technical and vocational education.

(b) One or more of the issues listed below was addressed by each country case study, with consideration of examples that have contributed to raising the recognition and status of technical and vocational education. These case studies are intended to provide examples of best practice and could act as a model for other countries desiring to develop policies and strategies to improve the status of technical and further education. Issues considered in national case studies included:

1. Strategies to innovate TVE systems to cope with the changing demands of the labour market caused by national economic development.
2. Policies to promote close linkages between TVE institutions and industries.
3. Strategies to raise the social status of the entire TVE system and its graduates.
4. Approaches to allocate and efficiently utilise the financial resources to support TVE.
5. Efforts to include entrepreneurial orientation and skills of TVE.
6. Measures to improve the quality of teachers and instructors.
7. Procedures to promote articulation between TVE and elements of the educational system, especially higher education.
8. Ways to improve career guidance and counselling.
9. Policies to improve the participation of special social groups in TVE.
10. Development of TVE in the informal sector.

## DELEGATES TO REGIONAL MEETING

### AUSTRALIA:

Mr Peter Bruhn  
Manager Curriculum Development Unit  
Royal Melbourne Institute of Technology  
Australia

### BANGLADESH:

Mr Adbur Rafique  
Chairman  
Bangladesh Technical Education Board  
Bangladesh

### CHINA:

Associate Professor Zeng Zida  
Central Institute of Vocational and Technical Education  
Beijing China

### FIJI:

Mr Nelson Delailomaloma  
Director General  
Fiji National Training Council  
Fiji

### INDIA:

Professor Arun K Mishra  
Director  
Pandit Sunderal Sharma  
Central Institute of Vocational Education  
Bhopal  
India

### INDONESIA:

Mr Mohamad Bakri  
Consultant KRMP  
Jakarta  
Indonesia

### JAPAN:

Mr Muneharu Iwamoto  
Senior Curriculum Specialist for Industrial Education  
Elementary and Secondary Education Bureau  
Ministry for Education, Science and Culture  
Tokyo  
Japan

### REPUBLIC OF KOREA:

Mr Taeck-duck Kim  
Managing Director for Vocational Training  
Korea Manpower Agency  
Seoul  
Republic of Korea

(4)

**MALAYSIA:**

Mr Hee Tieng Fok  
Deputy Director  
Technical and Vocational Education Division  
Ministry of Education  
Kuala Lumpur  
Malaysia

**PAKISTAN:**

Mr S Zaheer A Gillani  
Director  
National Institute of Technical Education  
Islamabad  
Pakistan

**THAILAND:**

Dr Siripan Choomnoom  
Department of Vocational Education  
Ministry of Education  
Bangkok  
Thailand

**VIETNAM:**

Professor Nguyen Minh Duong  
Director  
Department Secondary Technical Education and Vocational Training  
Hanoi  
Vietnam

**OTHER DELEGATES:**

Mr Hedayat Ahmed  
Director  
UNESCO PROAP  
Bangkok  
Thailand

Mr M A Qureshi  
Specialist in Technical & Vocational Education  
Thailand

Mr John Bartram  
Manager International Education  
Adelaide Institute of TAFE  
Adelaide  
Australia

**CASE STUDIES PROJECT MANAGER:**

Dr Adrian Haas  
Associate Director International Programs  
RMIT  
GPO Box 2476V  
Melbourne Victoria  
Australia 3001

**REGIONAL MEETING REPORTERS:**

Mr Nelson Delailomaloma Fiji

Mr Hee Tieng Fok Malaysia

## REGIONAL MEETING PROGRAM

### Sunday 11th September 1994

7-00pm Informal Welcome of Country Case Study researchers  
during evening meal - Hotel Equatorial

### Monday 12th September 1994

- 9-00am Regional Meeting Opened by  
Mr Hee Teng Fok  
Deputy Director  
Technical and Vocational Education  
Malaysian Ministry of Education
- 9-15am Opening Comments by Mr M A Qureshi,  
UNEVOC PROAP Bangkok
- 9-30 - 11-00am Chairperson: Professor Mishra  
Country Case Study researchers made brief presentation on  
key issues identified in Country Case Studies.  
Time allowed for discussion of themes and issues identified.
- Australia: Mr Peter Bruhn
- China: Professor Zeng Zida
- Fiji: Mr Nelson Delailomaloma
- 11-00 - 11-30am Morning Tea
- 11-30 - 1-00pm Country Case Study presentations: Continued
- Japan: Mr Muneharu Iwamoto
- Korea: Mr Taeck-duck Kim
- Malaysia: Mr Hee Tieng Fok
- 1-00 - 2-30pm Lunch
- 2-30 - 3-30pm Country case Study presentations: Continued
- Pakistan: Mr S Zaheer Gillani
- Thailand: Dr Siripan Choomnoon
- 3-30 - 3-45pm Afternoon tea
- 3-45 - 4-45pm Country Case Study presentations: Continued
- Vietnam: Professor Nguyen Minh Duong
- 4-45pm Country Case Study presentations adjourned
- 8-00pm Official Welcome Dinner  
Courtesy: Malaysian Ministry for Education

**Tuesday 13th September 1994**

- 9-00 - 10-30am      Chairperson: Mr Gillani  
Country Case Study researchers to make brief presentation on  
key issues identified in Country Case Studies (Continued)
- Bangladesh: Mr Adbur Rafique
- India:      Professor Arun Mishra
- Indonesia: Mr Mohamad Bakri
- 10-00 - 10-30am      Summary of key issues/themes identified in the  
Country Case Studies  
Presenter: Mr Peter Bruhn
- 10-30 - 11-00am      Morning Tea
- 11-00 - 1-00pm      Consideration of themes or activities which might be developed  
to enhance the status of TVE in the Region:  
Small Group Discussions
- 1-00 - 2-30pm      Lunch
- 2-30 - 3-30pm      Continuation: Consideration of themes or activities which  
might be developed to enhance the status of TVE in the Region.  
Small Group Discussions
- 3-30 - 3-45pm      Afternoon Tea
- 3-45 - 5-00pm      Reporting back: Recommendations for follow up action  
pertaining to strategy and possible follow up action to facilitate  
enhancement of the status of TVE in the Region.
- 8-00 pm      Dinner  
Courtesy: Director TAFE RMIT

**Wednesday 14th September 1994**

- 9-00 - 10-30am      Chairperson: Prof Mishra  
Further discussions on recommendations for follow  
pertaining to strategy and possible follow up action  
to facilitate the enhancement of TVE in the Region.
- 10-30 - 11-00am      Morning Tea
- 11-00 - 11-45pm      Acceptance of recommendations by the Regional Meeting.
- 11-45 - 12-00 noon      Final comments: Mr Ahmed UNESCO PROAP Bangkok
- 12-00 - 1-00pm      Lunch
- 1-00 - 8-00pm      Visit to Port Dickson Polytechnic  
(Organized by the Technical & Vocational  
Education Division - Malaysian Ministry of Education.)

8-00 pm Evening Meal

**Thursday 15th September 1994**

9-00 - 10-30am **Entrepreneurial Skills for Small Business  
Working Group Report**  
(This activity managed by Adelaide Institute of TAFE)  
Overview and background to the  
Exemplar Curriculum Project:  
Chairperson: Mr Qureshi  
Panel Session: Mr Gillani, Mr Bartram

10-30 - 11-00am Morning Tea

11-00 - 12-45pm Consideration of proposals for future action

12-45 - 1-00pm Final comments: Mr Ahmed, PROAP Bangkok

1-00 - 2-30pm Lunch

2-30 - 3-30pm Panel available for discussion as required

3-00 - 3-30pm Afternoon Tea

UNESCO UNEVOC Regional Meeting activities concluded

## SUMMARY OF PRESENTATIONS MADE AT REGIONAL MEETING

### UNESCO UNEVOC CASE STUDIES PROJECT

These summaries, which have been provided by the researchers, should be read in conjunction with Country Case Studies prepared in connection with this project.

#### **Australia**

#### **Mr Peter Bruhn**

Australia is currently implementing a number of key reforms in vocational education and training, as part of the National Training Reform Agenda (NTRA). This Training Reform Agenda has brought together Commonwealth, State and Territory governments, employers and unions to work collaboratively to improve the performance and the status of vocational education. The realisation of the need for reform stems largely from changing economic circumstances at the international level and a changing industrial relations environment within Australia.

This emerging training system is focused at the national level and has resulted in the development of national infrastructure to provide coordination for training arrangements across the country. Commencing with an important agreement between the Commonwealth, State and Territory Ministers responsible for vocational education and training in 1989, the features of a national system have progressively taken shape over the last five years.

The reforms are intended to provide national coherence in training arrangements and outcomes, improved quality and more widespread provision, greater flexibility in training delivery, a stronger focus on the needs of industry, participation by disadvantaged groups and increased public recognition of the value of training.

National policies which underpin the NTRA include:

- The development of a national system, rather than separate State systems of vocational education and training, offering national registration of training providers and accreditation of training courses, and national recognition of qualifications.
- A general move to competency based training, national competency standards and national curriculum designed around competency based training and assessment.
- A major re-examination of vocational education and training delivery systems with a strong emphasis on flexible and open learning and work-based approaches.
- Efforts to develop a more diverse and competitive training market, including a national system of funding overseen by the Australian National Training Authority (ANTA).
- The introduction of a new entry level training arrangements under the umbrella of the recently introduced Australian Vocational Certificate training system (AVCts).
- Measures to promote access and equity, including extending access to structured, publicly recognised training throughout the workforce and recognition of skills acquired through prior learning.

The directions for future development of vocational education and training in Australia have been established by the Training Reform Agenda. Many of the features of the new system are at the pilot/evaluation stage with some far-reaching issues still to be resolved.

## Bangladesh

### Mr Adbur Rafique

Bangladesh has undertaken a number of steps to improve the provision and hence the status of TVE.

1. Restructuring of the job market demand for skilled workers:
  - 1.1 Development of performance competence description in the form of
    - Job description
    - Job specification
    - Personnel specification
  - 1.2 Development of National Skill Standard classification at 5 levels.
    - NSS (Basic, III, II, I, Master)
2. Restructuring of the skill training programmes:
  - 2.1 - Vocational education as a part of general education.
    - Agriculture as a compulsory subject in secondary school (Class VI - X) (started January 1994).
    - Engineering and other trades as orientation subjects in secondary schools (Class VI - VII).
    - Engineering and other trade subjects for diversification (will start January 1995).
  - 2.2 Vocational education for skills development
    - Basic trade course for secondary school students from January 1994 for 5000 students rising to 30,000 students in January 1996, using facilities of existing training institutions in the afternoon.
    - One year trade course (9 months in an institution and 3 months in industry) leads to NSS III.
    - One year after NSS III in the same pattern leads to NSS II.
    - SSC (Voc) from Jan 1995 after 8 year school.
      - One year of training leading to NSS III.
      - One year after NSS III leads to NSS II and SSC (Voc).
    - HSC (Voc)
      - Two years after SSC leads to HSC (Voc) and NSS I.
  - 2.3 Vocational education as a continuation education.
    - In-plant training for employed skilled workers.
    - Co-operative vocational education between industry and training institutions.
    - Apprenticeship training programme.

## China Professor Zeng Zida

1. China has been undergoing rapid change, from a planned economy to a socialist market economy. So has the TVE system, with expansion of TV schools and enrolment, enhancement of teaching quality, and reform of the TV system in the fields of planning systems, administrative systems, curriculum methods and improvements to instructors in accordance with needs of the market economy.

2. China has introduced CBE and Dual-Systems of vocational training from some foreign countries as an experiment, in a number of TV schools. About 30-40 specialized secondary schools and 50 skilled worker's schools, are now trialing CBE and Dual-Systems of training.

3. Shortage of TV school teachers is now a critical issue in China. Quality of teaching in a sense of professional skills competence is also important. In addition to improvement of the education of TV teachers, it is suggested that UNESCO or UNEVOC hold seminars concerning TV teachers education, conducting inspections of some schools in regions of China, to discuss how the training of TV teachers might be enhanced.

**Fiji Mr Nelson Delailomaloma**

The vocational and training situation in Fiji remains static. While there are in place tripartite consultative mechanisms for discussing issues pertinent to economic development, and in the interest of the components of these tripartite mechanisms. Training as an economic development strategy and therefore pertinent to the interests of government, employers and the labour unions has not appeared on the agenda, of say the Labour Advisory Board in the recent past.

Since it is the government that is eventually and ultimately responsible for policy, the government should initiate the process necessary for it to obtain the information to permit the development of policy, relative to the development and enhancement of TVE. The owners of enterprises and management of unions must also accept responsibility for the initiation of moves that would lead to the development of policy, for the simple reason that training impinges on profitability and the status of skills in the work force.

The development of an appropriate model for TVE in Fiji would appear to be one way to approach this very important area, and for this the training institutions must also provide an input. The conference planned by the Fiji National Training Council for Human Resource Development personnel early in 1995, is the forerunner of what is expected to result in a vocational conference of all sectors of the economy to put forward recommendations on the directions that TVE in Fiji should take.

**India Professor Arun Mishra**

1. India is a large and diverse country with a predominantly agrarian economy.

2. Vocational education has a high priority on the country's development agenda. The structure of 10 + 2 + 3 is the prevailing national pattern of education.

3. School-Industry linkage is the part of the philosophy of TVE and a majority of courses are planned and run on collaborative basis.

4. Articulation between general and vocational education is being attempted by introducing new vocational courses at the first degree stage, prevocational and generic vocational courses at the secondary stage in addition to the preemployment job specific courses of the higher secondary stage.

5. Internal resource generation by vocational institutions at all stages is the direction for the future and guidelines are being developed for this purpose.

6. Open learning systems are being expanded to increase the outreach of vocational courses to school dropouts, working persons and students from remote areas.

7. Entrepreneurial development, to facilitate self employment, has been accorded a significant place in the VE curriculum.

**Indonesia Mr Mohamad Bakri**

1. Stages of Development of TVE in Indonesia:

Pre Establishment (before 1969)

- The continuation of the colonial system.
- The number of schools and students increased rapidly.
- No provision of equipment and facilities, especially for workshop practice.

Establishment (1969 - 1989)

- The TVE system to suit national development.
- The number of students enrolled increased.
- The improvement of curriculum to suit national needs, for various programs.
- The rehabilitation of facilities, as well as procuring new facilities including new buildings.
- The upgrading of teachers and recruitment of new teachers to fulfil training needs.

Quality improvement

- TVE schools should be effective and efficient.
- Introducing integrated development of schools, school centred, planned and conducted by schools.
- Establishing production units.
- Promoting the institutional partnership.

2. The latest development is the complementation of new policy of "link and match". Dual system program is introduced. Some practical workshop lessons are carried out in industry. Most of the programs in industry are conducted on a block release basis, of a minimum 3 months' duration.

**Japan Mr Muneharu Iwamoto**

1. Japanese society is in the midst of significant change in the fields of politics, economics, innovative technology and education. The TVE system is also in the midst of change. Japan is planning to educate more high level technicians in new 2 year institutes, after 3 years at technical high schools.

2. Japan is planning to educate more students in lower level tech voc education courses in new 'integrated courses' in general high schools.

3. Improving the quality of teachers and instructors is essential. In-service teacher training is also very important. In Japan, in-service teacher training programs are managed by the Ministry of Education, Board of Education, Tech Voc High School Principals Association. Japan is also planning to provide more new technology programs.

**Republic of Korea Mr Taeck-duck Kim**

1. Korea has launched a 5 year New Economy Plan 1993 - 1997.

The Plan has 3 basic goals:

- a. Securing economic growth potential.

- b. Expanding foreign markets and strengthening internationalization.
  - c. Improving the nation's standard of living.
2. To meet the requirements of industry regarding restructuring, government measures (legislation, planning) are in hand to educate and train technicians and more skilled manpower. This is to be achieved by means of the following strategies:
- a. Establishment of technician training system.
  - b. Introduction of career education system.
  - c. Introduction of dual system in Technical High School system.
  - d. Establishment of School-Industry Cooperation system.

### **Malaysia      Mr Hee Tieng Fok**

The Malaysian delegate gave a brief description of the changing economic profile in Malaysia since independence in 1957. This has changed from one mainly based on agriculture and mining to a more balanced economy with continuing growth in the manufacturing and industrial sectors.

The national economy is expected to maintain its growth by an average of 7 per cent per annum through the 1990's. Both these factors have led to increasing importance being placed on technical and vocational education to meet the country's need for technically trained manpower, both in terms of quantity and quality.

The technical and vocational education system has responded accordingly. Steps are being taken to increase the capacities of training institutions and also the cognitive content of the curriculum with more emphasis being placed on mathematics, science and technology.

To ensure the relevance of its curriculum for industrial needs, industrial representatives are invited to sit as advisory board members. The TSP program has been initiated to improve its linkage with industries. Some case studies in this program were presented.

### **Pakistan      Mr S Zaheer A Gillani**

1. Four decades ago, at the time of independence in 1947, Pakistan inherited negligible industry and negligible technical education institutional base.
2. As the industry grew, the need for suitably trained manpower grew, and over the period several polytechnics, colleges of technology, vocational education institutions and engineering colleges/universities were established.
3. With increasing volume and diversity of industrial activities the need for number, type and quality of technical manpower goes on changing.
4. Despite serious resource constraints, efforts have been made to meet the challenge of change through:
  - a. Establishment of more institutions.
  - b. Modernization and upgrading of existing institutions.
  - c. Quality improvement through upgrading of teacher capabilities through training. For this purpose a network of technical teachers' training institutions has been established which portray examples of best practice within limited resources.
5. Problems. Technical teachers' training institutions are now facing serious funds shortages and due to limited manpower available at every technical institution it is becoming increasingly difficult for the institutions to spare their employees for training.

6. Lack of appropriate linkages with industry results in isolation of education from the world of work which results in:
  - a. Institutions lacking confidence and backing by industry.
  - b. Industry has become critical of the graduates.
  - c. Problems in getting jobs for graduates.
  - d. Inadequate experience in the eyes of industry.
  - e. Inadequate course curriculum in the eyes of industry.
  - f. Misunderstanding between industry and education. The quality may not be acceptable as perceived by industry.
  
7. Recommendations.
  - a. Revitalize technical teachers' training programme, particularly reactivate fully the National Technical Teachers' Training College. For this purpose international and national agencies should provide funds for organization of training programmes.
  - b. Create active linkages with industry.
  - c. Involve industry in curriculum development.
  - d. Increase participation of industry in training programmes.

**Thailand Dr Siripan Choomnoon**

Thailand has experienced a rapid growth of the economy during the last few years' resulting in shortages of technicians and skilled manpower.

Policies and strategies adopted for development of technical and vocational education:

1. Speeding up growth of technicians and skilled manpower.
  
2. Develop information systems with up-to-date data on the labour market situation.
  
3. Placing high priorities on:
  - a. Decentralization of the TVE system permitting more user control.
  - b. Flexible and more choice of programmes.
  - c. Investment in new types of programmes for instance- providing more welfare incentives for instructors, scholarships to enable upgrading and updating of instructors to them to keep abreast with technology.
  
4. Strengthen close linkages between TVE and industries through:
  - a. Facilitating industries to engage in planning and implementing TVE programmes through a large number of special projects.
  - b. Provide incentives to TVE institutions to work cooperatively with the local industries.
  - c. Establish an industrial relations unit at both the central and institutional level.
  - d. Encourage cooperative activities with industries to engage in:
    - Curriculum development.
    - Instructor training
    - On the job training of students
    - Job placement of students
    - Exchange of information.

**Vietnam      Professor Nguyen Minh Duong**

Vietnam is carrying out a renovation program for social and economic reform, known as *Doi moi* and continuing progressive transformation of the economy, from a centrally planned to a market based system with a socialist orientation. The Communist Party of Vietnam set the objectives to modernize and industrialize the country, and education and training is considered as the first priority of the country. Therefore, technical and vocational training must undergo some change and develop quickly to meet the needs of the workforce to contribute to the development of the country.

Main policies and directions on continuing the renovation of the TVE system:

1. Diversifying delivery of the Voc/Tech system.

Organize many forms of schools, courses. Under the new regulations there are multigrade and multilevel technical and vocational schools for training semi-skilled workers, multiskilled-workers and technicians. Schools may be directly controlled by ministries, provinces or enterprises and districts.

This diversifications will help the Voc/tech system to expand so as to meet the varying needs for manpower of various economic sectors and geographical areas, build its ties with the community and rapidly respond to the socio-economic of the country.

2. Flexibility of curriculum and process

Develop the curriculum with a wide profile to give students a good background to changes in technology and techniques. Develop curriculum into modules to meet the demands of students and the labour market.

3. Socialisation, education and training

This policy points to the need for developing semi-public and private schools and classes for mobilising the resources of society for Voc/Tech education.

**SUMMARY OF KEY ISSUES  
IDENTIFIED IN COUNTRY CASE STUDIES  
Mr Peter Bruhn**

An analysis of the country Case Studies, and exemplified during individual country delegates presentations, clearly shows that all countries are at very different stages of development with respect to technical and vocational education.

Some countries have, or are creating, separate and distinct vocational education and training sectors, either as a part of, or affiliated with Universities and Polytechnics. Other countries are attempting to increase the number of skilled workers (trade and technician level) by using or modifying the existing secondary school systems.

Added to this is the overwhelming diversity of political systems, administrative structures and education and training policies and philosophies that exist within the Region. From the Case Studies, and in the course of discussion amongst the delegates, several key issues emerged:

1. Countries within the Region are committed to rapidly expanding technical and vocational education;
2. That future international competitiveness in trade and increases in national productivity will only occur by having a skilled work force capable of meeting the technological changes of the 1990s and beyond;
3. Several of the countries are emerging from an agrarian economy to embrace the new 'information technology society' with inadequate numbers of trained technicians to meet the current demands of business and industry;
4. That for technical and vocational education to be effective and efficient, linkages with business and industry were vital. Without collaboration of industry and enterprises the important work-based component of training, which is one of technical and vocational education primary goals, would be very difficult if not impossible to meet.
5. That funding arrangements in many countries favoured higher education sectors at the expense of technical and vocational education. This was in part due to the 'glamour and high profile of educating the professions'.

Mechanisms were being introduced in various countries to increase funding to TVE through the introduction of 'training levies', promoting investment in training by the private sector or allowing schools/colleges to operate as commercial businesses by selling products and services.

6. That the countries in the Asia and the Pacific Region had embarked on various 'quality improvement' cycles to reshape/improve technical and vocational education by:

- Adopting and implementing established technical and vocational education systems such as the Dual System from Germany;
- Promoting institutional/enterprise partnerships in the development and delivery of vocational education and training initiatives;
- Exploring the implications of developing technical and vocational curricula using competency standards and competency-based training and assessment approaches and with the active participation of business and industry;
- Reviewing other countries initiatives in flexible delivery and open learning with the intent of incorporating more flexible learning approaches within their TVE systems;
- Addressing the shortfall in qualified and experienced TVE teachers and trainers by establishing institutes to improve professional competence of existing teachers and trainers and significantly increase initial teacher training enrolments for those wanting to teach in TVE or industry;
- Governments increasing resource allocations to TVE institutes for the modernisation/upgrading of facilities and the purchase of equipment essential for teaching TVE programs;
- Developing regional or national policies and procedures to allow for greater articulation between general education and TVE and career pathways into higher education;
- Placing greater emphasis on entrepreneurial skills development within TVE programs to cater for the needs of people wanting to establish and operate small businesses;
- Addressing the needs of special social groups, especially women, by providing support mechanisms and facilities so that they can actively participate in TVE and work in 'non-traditional' occupations and jobs.

## **RECOMMENDATIONS BY REGIONAL MEETING UNESCO UNEVOC CASE STUDIES PROJECT**

### **A REGIONAL FRAMEWORK**

#### **1. Strategies to innovate Technical and Vocational Education (TVE) systems to cope with the changing demands of the labour market caused by National Economic Development.**

Countries in the Asia/Pacific Region, in common with most other countries, are experiencing the effects of technological change on their economic development. Although the rate of technological change is different for all countries in the Region, these changes impact heavily on business and industry which needs to have a skilled workforce to meet the demands of new industrial and business processes and changed work practices.

To meet the challenges imposed by technological change, and to fulfil short and long-term economic goals, countries in the Asia and Pacific Region will need to develop responsive TVE systems, that provide the workforce with the skills required to meet the demands of increasingly complex industrial processes and the continued sophistication of information technology systems within the business sector.

It is therefore appropriate that countries in the Asia and Pacific Region support and adopt the following actions:

#### **National TVE Policy Development**

1.1 National TVE policies developed by governments or national agencies should be designed to achieve both short and long-term goals related to the implementation and improvement of TVE.

1.2 Regional and/or state political, educational and labour market bodies and committees should actively participate in the development of national TVE policies.

1.3 TVE providers (institutes, colleges, schools) in each country should have an input into and influence the way TVE policies are developed, so that policies and/or guidelines meet country economic, education and training requirements. TVE providers should have a 'voice' in the debate on the future of TVE in their own country.

#### **Labour Market Planning and TVE Research**

1.4 National TVE policies must be based on accurate and quantifiable labour market planning data. To ensure this is achieved, countries must establish agencies and/or systems to collect, analyse and distribute labour market information on which national policies and TVE programs can be developed.

1.5 National and/or state agencies and organisations should be established to undertake research into TVE within the country and to critically evaluate international experiences in education and training with the purpose of providing government 'policy-makers' with independent advice and reports so that short and long-term TVE goals, both at the national and regional level are achieved.

1.6 Any country in the Region should have the right to access TVE research data and labour market information from other countries free from any restrictions or limitations.

## **Funding for TVE**

1.7 Given the crucial role TVE has in contributing to the economic development of a country through the education and training of skilled workers and technicians, government funding models should be reassessed so that more funds are directed to TVE.

1.8 There should be consultative processes established between private and public sectors, to discuss and decide on the most appropriate funding arrangements that allow for additional spending on TVE, by strengthening relationships between education, business and industry. Examples of mechanisms that can increase the funding for TVE are 'training levies' on business and industry, the ability of TVE providers to levy fees on trainees and students, and the capacity of TVE providers to operate as 'commercial enterprises'.

1.9 Governments should encourage the private sector to invest in TVE and support private sector initiatives, where it is demonstrated that these will lead to increased availability of training places, structured education and training programs and a credential or award that is recognised by industry and business.

## **Curriculum/Training Program Development**

1.10 Curriculum/training program development is one of the most important aspects of a TVE system. Given that TVE systems should ensure the curricula or training specifications are aligned with the needs of business and industry, countries in the Region are encouraged to adopt a competency based vocational education (CBVE) approach.

1.11 For CBVE to be successful, countries will need to ensure that they establish or strengthen their TVE systems to be able to accommodate the requirements of CBVE for extensive industry involvement, course/program design and delivery, competency-based assessment, certification and accreditation.

1.12 TVE systems must ensure that they have the policies and processes established to maintain standards and accredit programs.

1.13 In view of developments in information and instructional technology, formats should be developed for curriculum documents that allow for translation and adaptation from country to country in the Region.

1.14 UNESCO should undertake an evaluation project, in co-operation with the World Intellectual Property Organisation (WIPO), to address the complex question of copyright as it pertains to the development and use curriculum documentation within the Region.

1.15 UNEVOC should investigate the establishment of a Regional Clearinghouse for collecting and disseminating policy documentation, TVE research reports and monographs, curricula and instructional materials.

1.16 There currently exists examples of co-operative curriculum development between countries within the Region. These co-operative ventures in designing high-priority curricula should be evaluated, documented and the results disseminated to countries proposing similar co-operative ventures.

## **2. Policies to promote close linkages between TVE institutions and industry.**

2.1 Industry should be involved from the conceptualization and planning stage to the implementation and assessment of TVE programs.

2.2 There should be a legal framework to encourage industry to make financial contributions towards the provision of TVE .

2.3 Mechanisms need to be put in place to permit industry linkages either on a staff release or exchange basis.

2.4 Use of industrial infrastructure and equipment for TVE purposes should be encouraged.

2.5 TVE courses should be structured so as to satisfy objectives of industrial need.

## **3. Allocation and Utilization of financial resources to support TVE.**

Financial resources need to be efficiently allocated and utilized to support TVE.

3.1 Funding allocations should take into account national development priorities.

3.2 When allocating funds care should be taken to reward cost effective institutions.

3.3 The performance of institutions should be monitored to ensure that they meet defined objectives.

3.4 Funding should take into account equity and regional disparity considerations.

## **4. Measures to improve the quality of teachers and instructors.**

As teachers are critical to any program of instruction, their enhancement is essential for TVE status. Resources necessary to enhance the development of TVE teachers should be directed at ensuring improvements to the quality of teaching.

4.1 TVE teachers should be appropriately qualified to teach a program.

4.2 It is desirable that TVE teachers have the necessary industrial experience.

4.3 Mechanisms must exist to enable teachers to keep up to date with relevant industrial knowledge.

4.4 TVE teachers must be trained in effective management of the educative process.

## **5. Efforts to include entrepreneurial orientation and skills in TVE.**

Self-employment is an important goal for those pursuing TVE in many countries. This necessitates the inclusion of entrepreneurial skills for small business development in the TVE curriculum.

5.1 An appropriate entrepreneurial skills curriculum should be developed and adapted by countries in the region.

5.2 Trainers from different countries should be given a general orientation/induction to entrepreneurship on a regional basis before the curriculum is implemented.

5.3 Curriculum development should be undertaken through a regionally coordinated mechanism and sharing of instructional resources should be encouraged.

5.4 Each country should expand entrepreneurial development activities and ensure wider coverage for identified TVE client groups.

#### **6. Procedures to promote articulation between TVE and elements of the educational system, especially Higher Education.**

Many countries in the Region are addressing issues associated with the articulation of TVE into Higher Education. Examples are available to provide countries with the processes and procedures to achieve this.

6.1 Country policies and procedures should ensure that fair and equitable processes are available for TVE graduates to articulate into, or gain credit towards, further or Higher Education.

6.2 Countries should endeavour to develop articulation/credit transfer systems that not only recognise formal study and qualifications but also adopt the principle of 'Recognition of Prior Learning' (RPL). RPL should be investigated by countries currently not using this approach as a legitimate means for persons to gain access to TVE programs or to articulate into further or higher education courses.

6.3 For articulation and RPL processes to be successful, policies, guidelines and procedures will need to be developed by each country to cover the important aspects of assessment and certification.

6.4 Assessment and certification processes will need to be devised to allow the assessment of trainees/students by appropriately qualified persons within the TVE system against established state or national standards or benchmarks.

6.5 TVE credentials should only be awarded by institutes and organisations who meet all the legal requirements established by national TVE authorities with respect to assessment, certification and registration. It should be mandatory that credentials obtained by the trainee/student from any TVE system, institute, school or private organisation should be recognised and endorsed by industry and business.

6.6 Flexible delivery and open learning methods of TVE propagation may also assist in promoting articulation.

#### **7. Ways to improve career guidance and counselling.**

Career guidance and counselling should be improved as it would assist in course choice and industry placement..

#### **8. Policies to improve the participation of special social groups in TVE.**

8.1 Due to a number of socio-economic, geographical and political factors, certain groups within countries have not had access to TVE programs. Therefore, it is imperative that countries cater for the needs of special groups within society and promote the principle of access and equity.

8.2 Countries should develop national policies and special TVE programs to accommodate the training needs of women wanting to work in non-traditional occupations/jobs. Countries will also need to ensure that support mechanisms and appropriate facilities are made available for women undertaking TVE programs.

**9. Development of TVE in the informal sector.**

Training in the informal sector should be integrated into national systems of TVE through implementation of:

9.1 National systems of course accreditation and assessment which cover of all providers of TVE, including the informal sector.

9.2 Recognition by the formal TVE sector of relevant programs undertaken in the informal sector.

## ENTREPRENEURIAL SKILLS FOR SMALL BUSINESS EXEMPLAR CURRICULUM WORKING GROUP REPORT

Chairperson: Mr M. Qureshi, Specialist in Technical and Vocational Education  
UNESCO PROAP Bangkok

Panel: Mr J. Bartram (Adelaide Institute of TAFE), Mr Z Gillani (Pakistan)

Mr Bartram outlined the background to the project.

The Chairperson from the Exemplar Curriculum Working Group Report led the meeting through the document, explaining the purpose of the document and the principles on which it was based. The curriculum was competency based. It had been developed as 6 modules which could be delivered using a range of methodologies from distance to classroom. The modules could be offered as stand alone or in a number of sequences. The course is constructed as a 200 hour package in total. The award recommended was a Certificate in Technical and Vocational Education.

Delegates indicated the various responses of their respective countries. In particular, India, Malaysia, Bangladesh and Korea had moved very quickly towards adopting the exemplar curriculum to meet their own particular needs. It was anticipated that implementation would take place very rapidly.

### Recommendations

Delegates stressed that UNESCO had provided a catalytic role in the development of entrepreneurial curriculum. The role of UNESCO will continue to be critical if the level of enthusiasm is to be maintained.

The meeting endorsed the recommendations of the Exemplar Curriculum Working Group.

#### Recommendation 1

That a core monitoring group be established.

#### Recommendation 2

That a clearing house for entrepreneurial training support be established.

One additional recommendation was put to the meeting

#### Recommendation 3

That a proposal be developed to facilitate easy networking of UNEVOC and related centres.

Mr Ahmed, Director, UNESCO PROAP Bangkok attended for the part of the meeting that considered recommendations and gave the final address. In so doing, he thanked the members for their strong support and participation as UNEVOC establishes itself in this region.