Current issues, concerns, challenges and prospects for TVET and education for the world of work in the Asia Pacific region

Background paper for Bonn International Centre for TVET Planning Meeting, Bangkok, May 20–25 2002

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Introduction

Three key documents form the basis for this discussion paper:
1. The Report and Recommendations of the Second International Congress on technical and Vocational Education held in Seoul, April 1999
2. The report and recommendations of the UNESCO TVET Asia Pacific Conference held in Adelaide March 2001

Other UNEVOC meetings of relevance include 'Learning for life, work and the future' held in Botswana in December 2000, TVET conference held in Fiji in July 2001 and the 'Improving subject knowledge and exchange of information through UNEVOC' meeting held in Malaysia in October 2001.

The purpose of this paper is to draw on the outcomes of these initiatives, particularly the Revised recommendation, and to reflect on the role of TVET on both a global basis and in the Asia Pacific region. Hence we will be able to identify the common issues and challenges that face the continuing development of TVET in the region. The paper is divided into three sections:

A. A description of TVET and its objectives
B. Issues and challenges for the Asia Pacific region outlined at the Adelaide conference
C. Ten key priority areas for the region with suggested actions, which will form the basis for discussion at the planning meeting.

The symbol ~ indicates a high priority area that could be the focus of a UNEVOC project.

A. What is TVET?

Addressing the closing session at the Seoul Congress in 1999, Mr Colin Power, then Deputy Director General for Education, UNESCO stressed that "today, more than ever before, technical and vocational education and training has become a necessity not only for young people who will have to prepare themselves for the challenges of the next century, but also for the entire population of each country so that every individual can play an active role in the world of the 21st century, which will seek to narrow economic and gender disparities while preserving the integrity of the environment."

The Revised recommendation concerning technical and vocational education (2001) ratified during the 31st General UNESCO Conference, defines TVET as 'a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical and vocational education is further understood to be:

(a) an integral part of general education;
(b) a means of preparing for occupational fields and for effective participation in the world of work;
(c) an aspect of lifelong learning and a preparation for responsible citizenship;
(d) an instrument for promoting environmentally sound sustainable development;
Objectives of TVET

Based on the report and recommendations from the Seoul Congress, the Recommendation further defines a set of objectives for TVET to include, in summary:

Para 5. ...as a vital aspect of the educational process in all countries as a means to:

- contribute to the achievement of democracy and social, cultural and economic development
- develop the potential of all individuals, regardless of gender, religion, race and age including a critical understanding of their environment
- empower people to contribute to environmentally sound sustainable development

Para 6. ...as an integrated component of education, the world of work and the community and as part of a system of lifelong learning, abolishing barriers between levels and areas of education, between education and the world of work and between school and society to improve the quality of an individual's life. Strategies may include:

- the integration of technical/vocational and general education
- the creation of open and flexible educational structures
- the recognition that work experience is a part of learning
- creating a learning culture that allows people to constantly improve their professional skills and knowledge.

Para 7. 'Technical and vocational education should begin with a broad base, that facilitates horizontal and vertical articulation within the education system and between school and the world of work thus contributing to the elimination of all forms of discrimination and should be designed so that it:

(a) is an integral part of everyone's basic general education in the form of initiation to technology, the world of work and human values and standards for responsible citizenship;

(b) may be freely and positively chosen as the means by which people develop talents, interests and skills leading to an occupation in various sectors or to further education;

(c) allows access to other aspects and areas of education at all levels, including institutions of higher learning, by being grounded on a solid general education and, as a result of the integration mentioned in paragraph 6(a), containing a general education component through all stages of specialization;

(d) allows transfers from one field to another within technical and vocational education;

(e) is readily available to all and for all appropriate types of specialization, within and outside formal education systems, and in conjunction or in parallel with training in order to permit educational, career and job mobility at a minimum age at which the general basic education is considered to have been acquired, according to the education system in force in each country;

(f) is available on the above terms and on a basis of equality to women as well as men and where the learning and working environment is made suitable for the participation of girls and women by removing overt and covert bias and discrimination and seeking strategies for motivating girls and women to take interest in vocational and technical education;

(g) is available to people with disabilities and to socially and economically disadvantaged groups such as immigrants, refugees, minorities (including indigenous peoples), demobilized soldiers in post-conflict situations, and underprivileged and marginalized youth in special forms adapted to their needs in order to integrate them more easily into society.'
Para 8. 'In terms of the needs and aspirations of individuals, technical and vocational education should:

(a) permit the harmonious development of personality and character and foster the spiritual and human values, the capacity for understanding, judgement, critical thinking and self-expression – i.e. human centred and foster a culture of peace;

(b) prepare the individual for lifelong learning by developing the necessary mental tools, technical and entrepreneurial skills and attitudes;

(c) develop capacities for decision-making and the qualities necessary for active and intelligent participation, teamwork and leadership at work and in the community as a whole;

(d) enable an individual to cope with the rapid advancements in information and communication technology.'

B Issues and challenges for the Asia Pacific region

TVE is the component of education most directly concerned with the acquisition of the knowledge and skills required by workers in most manufacturing and service industries. Although TVE may not create jobs, it can provide people with the skills required to give them better opportunities for self-employment, wage employment, re-employment and even informal sector initiatives. TVE needs to strengthen basic cognitive learning to give students and trainees more flexibility to meet the changing requirements of the workplace. (Congress background paper)

Participants at the UNEVOC Conference held in Adelaide in March 2001 agreed that the following issues were central to the development of TVET in the region.

1 Policy and planning

The Seoul Congress identified many factors that are impacting on the increasing need for careful and well thought out national policies and plans for the development and ongoing maintenance of TVET systems. The basic challenge of the globalized economy is the requirement to adjust and compete in a rapidly changing environment. As the Congress found, 'central to the effort to compete in the twenty-first century is the preparation of a productive, flexible workforce. Every country will be obliged to enable its citizens to acquire the skills necessary to survive and to improve their quality of life because the demands of the workplace are likely to leave people without skills unemployed and unemployable. Yet there are large numbers of school leavers worldwide who are unlikely to obtain formal employment and who are even more in need of these survival skills.'

The impacting factors identified in Seoul include:

- the way the applications of information and communication technologies are dramatically changing the way people in many parts of the world live, learn, work or think about work.

- changes in the work content of most occupations as a result not just of the application of technology but also rapid economic growth, particularly in the developed countries

- competition from transnational corporations in many developing countries, particularly in Africa, leading to the collapse of local work opportunities and the consequent growth of the informal sector

- the combination of globalization and technological developments has enabled highly skilled technical personnel living in developing countries to provide services for industries in developed countries e.g. computer software developers and telephone service providers

- transition towards a market economy is placing demands for new skills and trades. The obsolete knowledge, skills and work attitudes of their labour forces have led to growing unemployment affecting disadvantaged groups such as urban youth, older urban people and rural people
• rapid technological change makes skills obsolete very quickly and demands higher levels of initiative and more frequent retraining. This changing technological scenario may also require workers to change jobs several times during their working lives.

• cross-disciplinary knowledge and what are often called ‘essential’ or ‘key’ competencies are required including better communication and interpersonal skills, and the ability to work in teams, motivation, creativity, self-adjustment, commitment, attention to detail and a sense of responsibility are critical to success and must take equal priority to functional skills in TVET.

• evolution from ‘supply driven’ TVET to ‘demand driven’ TVET. The new global economic environment demands a further re-orientation in TVET to render it more responsive to the needs of students, workers and employers.

The development of national policies on TVET is continuing in Member States but areas that need to be addressed for many nations in the Asia Pacific region include:

a) strategic planning
b) development of partnerships with industry
c) equity and access issues regarding the implementation of TVET in rural and remote areas and for women and girls
d) development of national standards and cross border qualifications frameworks
e) relationships between formal and informal TVET learning.

Key strategies were identified to include:

• documentation of best practice examples of TVET practice and planning including both formal and informal TVET learning
• data collection on the implementation of TVET in Member States
• TVET strategic planning and management particularly on the outcomes of training and building human capital, and including
  – quality assurance strategies
  – training standards
  – strategic planning/management
  – database development to facilitate sharing of resources
  – copyright issues.

Priorities for action were identified as the need to:

• collect and disseminate data on the implementation of TVET in Member States, providing national data to UNESCO for international dissemination
• establish mechanisms to share strategic planning and evaluation models including statistical indicators
• develop and disseminate policies and guidelines
• ensure consideration is given to equity issues particularly to assist rural and other disadvantaged people to access TVET, including the development of flexible learning options
• integrate the concept of values education in TVET curriculum
• consider work experience by students as an integral component of TVET as a strategy to ensure employability of graduates, and to promote partnerships between industry and training institutions
• collaborate with industry and the community to promote TVET as a mechanism for learning (including lifelong learning), encourage skills upgrading and continuous workforce learning including relationships between formal and informal TVET learning.

2 Teacher training and professional development

Teacher training and professional development of TVET staff continue to be key issues for TVET development including:

• minimum qualifications and standards and models of best practice
• professional development programs such as exchange programs for teachers
• gender balance among TVET teachers

Current issues, concerns, challenges and prospects for TVET and education for the world of work in the Asia Pacific region
• values education in teacher training courses
• exchange and sharing of information between teachers.

Priorities for action were identified as the need to:

• identify and implement strategies to ensure that TVET teachers are industry qualified in addition to teaching qualifications, including practical components and re-training of teachers in industry
• include teacher behaviour/values transmission in teacher training programs.
• identify and implement strategies to ensure the most experienced people are recruited to teaching and administrative positions in TVET institutions
• identify and implement strategies to eliminate sexual harassment in TVET institutions
• identify and implement strategies to facilitate teachers’ access to information and communications technology
• information technology literacy included in initial training and professional development programs
• identify and implement strategies to ensure a gender balance of teachers across all training areas to facilitate the establishment of role models for students.

3 Partnerships and alliances
Establishing and developing partnerships and alliances within nations and across regions are effective strategies to ensure efficient and effective development of TVET systems. These alliances may be across educational sectors, with industry and across international borders.

Issues include:

• role of the UNESCO International Centre for TVET and its role as a clearinghouse for TVET information including curriculum, methodologies, learning materials etc
• sharing information and knowledge about TVET developments e.g. through the NCVER’s VOCED database
• ability of practitioners and policy makers to come together to discuss issues of common interest e.g. curriculum, methodologies, learning materials etc
• sharing curriculum and resources for groups of countries.

Priorities for action were identified as the need to:

• the development of the UNESCO International Centre for TVET and its role in the region
• contribute to initiatives such as the VOCED database as a means of sharing information and knowledge about TVET developments
• the establishment of a forum through which practitioners and policy makers may come together to discuss issues of common interest e.g. curriculum, methodologies, learning materials etc
• collaborate with industry and across educational sectors within each nation to facilitate the development of effective TVET systems
• promote the TVET e-forum as a means for discussion of professional issues
• development of a regional qualifications framework to permit portability of qualifications throughout the region
• development of common curriculum and learning resources

A direct result of the TVET conference held in Fiji in July 2001 was the establishment of the Pacific Association of TVET Colleges and Polytechnics. This is an initiative that Asia and other regions could follow.

4 Quality assurance
Participants considered that the revised recommendations on TVET would form the basis for international quality assurance of TVET. As was agreed at Seoul, ‘quality assurance is essential to ensure a new higher status for TVE. Qualification standards, certification processes, valid assessment methods and acceptable outcomes are all key ingredients and should be the hallmarks of all TVE systems’. Priorities and strategies such as those identified in other sections will also impact on quality issues.
Priorities for action were identified as the need to:

- widely distribute the revised UNESCO convention and recommendations on TVET
- facilitate workshops and seminars on the revised recommendations to ensure universal adoption by Member States

5 Research
Research is a critical component in the strategic planning, development and maintenance of relevant TVET systems in Member States in setting priorities, decision-making, allocating resources, determining outcomes and evaluation.

Key issue is how to facilitate and disseminate research on all aspects of TVET including:

- the impact of globalisation on TVET
- skills audits to inform specific training
- identification of performance indicators
- collaborative research between Member States
- how and/or whether TVET systems are meeting local needs.
- comparative research on various models of implementation
- institutional research to inform practice and policy.
- access and equity and retention issues
- TVET as a component of entrepreneurship development
- rural distance and information sector development
- National Qualifications Framework and national curricula
- TVET teacher development
- barriers to learning
- role of industry in TVET
- continuation of research aligned to practitioners

6 Knowledge and information management
Knowledge management is a key issue for the development of TVET in the Asia Pacific region. Sharing of information and knowledge between Member States is necessary to foster mutual understanding between nations, the development of human rights and the growth and development of nations and Member States were encouraged to collaborate on promoting opportunities for knowledge sharing between nations.

Issues include:

- minimum standards for access to knowledge, taking into account the limited means of knowledge transfer in some developing nations and the priority areas health and education.
- the role of governments in providing access to knowledge.
- opportunities for knowledge sharing between nations including the inclusion of the issue in upcoming conferences.

At the Pacific meeting in Fiji in July 2001, key issues were identified to also include regional cooperation, standards, accreditation and credit transfer, and the exploitation of distance education methodologies to increase access to TVET.
C Key priority areas

Developing countries face special challenges in improving their TVE systems. The cost of introducing new equipment and tools, and retraining the teaching staff is often prohibitive. Prospective employers in these countries will therefore need to assume increasingly critical roles in planning and executing TVE programs, furnishing training facilities for students and teachers, and providing clear projections regarding the evolving needs of the workplace. It is thus clear that in this rapidly changing social and economic climate, the sustainable development of both businesses and the community will depend on all stakeholders enhancing their social responsibility and commitment through a close engagement in planning and implementing TVE systems. (Congress background paper)

While national priorities vary from country to country, according to their socio-economic conditions and stage of development with TVET, some common regional needs can be identified:

1 Raising the status of TVET and access to TVET

The Revised recommendation provides excellent guidance for Member States to raise the status and provide access to TVET through the sections on the objectives of TVET (section II), policy, planning and administration (section III) including quality assurance processes, standards and the application of research, and section IV-VI which outline the role of TVET as a component of general education, as preparation for work and lifelong learning.

Suggestions for regional UNEVOC action include:

1.1 an implementation strategy to facilitate adoption of the Recommendation by Member States

1.2 assistance to Members States to review and/or development of TVET policies and planning instruments (for example providing examples of how co-ordination between ministries with responsibilities for aspects of TVET, especially employment, education, training, economic development and welfare can facilitate TVET access)

1.3 joint data collection projects with the International Labour Office e.g. labour force analysis, skills studies to assist national planning activities

1.4 documentation/comparative analysis of quality assurance processes in the region (as recommended at the Malaysian meeting ‘that UNEVOC act as a catalyst to create a structure for a regional coordinating body to be put in place’)

1.5 workshops and mobile training teams to support national activities and technical support for policy development.

As was aptly stated to the Botswana workshop, Learning for Life, Work and the Future: 'In translating equality of access into full equality of participation, the priority must ... be to tackle barriers to participation. Possible solutions include

- the innovative use of facilities;
- cost-effective design and construction of facilities and their usage;
- putting equal opportunities policies in place;
- having a wide range of programs that are flexible to suit all target groups.'

Recommendations made at the Malaysian meeting included:

- ‘that programs be made modular and the optimum utilization of UNEVOC centres be made to ensure the reach and spread of TVET education for all.
- ...that national and regional initiatives be formulated to create facilities and tools for information sharing to help further distance learning program objectives.’

Distance education is an option that needs to be seriously encouraged as relevant, quality methodologies, suitable for developing and developed countries where physical barriers preclude access to TVET by sections of the population.
Action which UNEVOC can facilitate on a regional basis to assist increasing access to TVET includes:

1.6 the collation and dissemination of best practice examples of initiatives including distance education programs which enhance access to TVET for women and girls and people with disabilities and to those identified in the Recommendation as socially and economically disadvantaged groups such as immigrants, refugees, minorities (including indigenous peoples), demobilized soldiers in post-conflict situations, and underprivileged and marginalized youth. (para 7g)

2 Provision of quality teachers and ongoing staff development

Seoul recommended that the role of the teacher remains paramount... (and that) a re-thinking must take place as to the qualifications required of the TVE teacher of the twenty-first century, including the optimum balance of training acquired on the campus and in the work place.

This is echoed in section IX of the Revised recommendation which begins 'To ensure the high quality of technical and vocational education priority should be given to the recruitment and initial preparation of adequate numbers of well-qualified teachers, instructors/trainers, administrators and guidance staff, and to the provision of continuous professional upgrading throughout their career and other facilities to enable them to function effectively.' (para 72)

The issues concerning TVET teachers raised in both the Botswana workshop and the Malaysian meetings are echoed in the Asia Pacific region:

• the shortage of appropriately trained trainers in the sub-region is severe
• a high percentage of vocational teachers and instructors working in the public vocational training system require continuous upgrading of training skills, particularly in areas of ICT and innovative methodologies
• if TVET continues to grow at current rates there is a considerable gap between supply and future demand
• teachers and instructors require a foundation of general education as well as technical and vocational skills in addition to industrial experience.

As at the Adelaide conference, the Botswana workshop identified underlying causes for these problems to include:

• poor conditions of service and low levels of remuneration as compared with other tertiary institutions
• lack of staff development programs
• lack of appropriate career opportunities
• the low value accorded to vocational as opposed to academic education.

The Botswana workshop identified several interventions and solutions that could also be adopted in the Asia Pacific region:

• 'National Training Authorities should create a new Professional Training Service (PTS) established on attractive salaries and conditions of service
• Entrants to the PTS should possess at least a skill certificate, a technician or technological qualification
• Competency in key skills such as communication, numeracy, basic information technology and interpersonal relationships is important.
• Post-qualification work experience is essential
• Training staff could be given industrial or commercial experience at least once every 3-4 years.
• Training staff in industry or commerce could be attached to institutions on a regular basis, not only to cover shortages but also to bring work ethics into the training.' (background paper)

Useful initiatives for UNEVOC to follow up in the region are outlined in the Recommendation (para 98):
2.1 'Member States should encourage the creation of a climate favourable to international cooperation with a view to capacity building in developing countries especially in the areas of acquisition, adaptation and application of technology through:
(a) fellowship and exchange programs for teachers/trainers, students and administrators/managers;
(b) establishing sustained cooperation between similar institutions in different countries such as through twinning arrangements;
(c) provision of work experience abroad, particularly when opportunities at home are limited;
(d) encouraging countries to introduce and make known their educational programs outside national boundaries.'

2.2 In addition, the Malaysian meeting recommended that 'the UNEVOC Bangkok office assist in the provision of management training of fledgling UNEVOC center staff through the secondment of a resource person'.

2.3 Promotion of the UNEVOC e-forum and the UNESCO Bangkok web sites as means of sharing information and strategies.

3 Development of TVET curricula (including information and communication technologies) to meet national and community needs and aspirations (at all levels and forms of lifelong vocational learning) and to include flexible delivery modes such as distance and open learning

Issues for the Asia Pacific region are similar to those identified in Africa:
- the need for trainees to be multi-skilled, flexible and hard-working (work ethics)
- the introduction of re-training programs (flexibility, diversification)
- emphasis on entrepreneurship courses, business skills including skills for self-employment, particularly at artisan level (reduce reliance on formal section employment)
- providing opportunities for lifelong training, which benefits everyone. (self worth and esteem)
- integration of key or essential competencies and values education across the curriculum (multi-skilling)
- integration of work experiences as an essential component of TVET curriculum.

As Dr Lourdes Quisumbing, Chair APNIEVE so eloquently challenged the participants at the Adelaide conference: 'The introduction of values education in TVET’s economic and human resource development program may well be the turning point of its history; for at last, the full development of the total human person is given proper recognition and importance.'

3.1 compilation and publication of best practice examples of curriculum that incorporate these features

3.2 workshops and training sessions on the development of such curriculum.

4 Development of common curriculum and TVET teaching materials that could be used across the Pacific such as those being developed by the Commonwealth of Learning.

This issue is one that is raised at almost every regional meeting, most recently at the 2nd World Congress of Colleges and Polytechnics in Melbourne in March 2002. Related to the next priority area, articulation and recognition frameworks, access to teaching and learning materials is a desperate need across the region. The issues which are generally raised as a barrier to sharing resources is that of intellectual property rights and copyright, and costs of customisation, reproduction and distribution.

'The development of teaching and learning materials that utilize the information and communication technology and are suitable for international or regional use should be considered a priority area. These materials should contribute to the progressive establishment and recognition of common standards for professional competencies/qualifications acquired through technical and vocational education. Moreover, such teaching and learning materials should encourage deliberate international
collaborative teaching and learning among institutions.' (Recommendation para 97)

The Recommendation also suggests (para 93c) 'enhancing the sharing of intellectual property, including through research and development, for the benefit of learners in all countries and situations'.

Suggestions for UNEVOC regional action include working with agencies such as the Commonwealth of Learning to:

4.1 develop worldwide framework/protocols for sharing resources
4.2 establish a database of learning materials and curriculum (e.g. the VOCED database)
4.3 seek sponsorship from multinational organisations to fund customisation, reproduction and distribution (e.g. Melinda and Bill Gates Foundation, Reader's Digest)

5 Establishment of accreditation and recognition frameworks: for national, subregional and international recognition of regional TVET qualifications

The Second International Congress considered national qualifications frameworks, recognition of prior learning and credit transfer to be important, and made recommendations accordingly which are reflected in the Revised recommendation. One of the Botswana papers proposed the establishment of a Credit Accumulation and Transfer System (CATS). These systems apparently allow students mobility and access to further and higher education through the accumulation of educational credits, and the application of these towards a further and higher education qualification. The underlying principles are accessibility, transferability, flexibility and cost efficiency. The Malaysian meeting recommended 'that countries take steps to formulate a set of criteria to benchmark accreditation and to create a set of standards for the determination of the ratio between professionals and technical manpower requirements'.

Suggestions for UNEVOC regional action include:

5.1 Using the national qualification frameworks models that many countries have in place (Australia, New Zealand, UK) and/or any work being done in Africa in this area in the Asia Pacific region.

6 Research into economic development, labour and human resource needs

As the final paragraph (100) in the Recommendation states, 'Internationally recommended standards and norms should be continuously evaluated through sustained research and monitoring on the effectiveness of their application in each country with a view to empowering them to use lifelong technical and vocational education as a means of narrowing the disparities between the North and the South and as a bridge to a more prosperous and peaceful future in the twenty-first century.'

The Recommendation provides a useful standard in paragraph 95 for the exchange and sharing of research and information in which the Bonn Centre, the International Labour Office and the Centres of Excellence in Korea and Australia (KRIVET and the NCVER/AIT) may take the lead. The issue of graduate tracking surveys was raised in Malaysia and an area of interest to the ILO.

6.1 The key issues for the region are
   - identifying research foci
   - dissemination of the information and research findings.

7 the use of existing and new methods for sharing of knowledge, the exchange of information, the development of a database of TVET programs and initiatives or a resource centre

As with research, the Recommendation provides a good foundation for facilitating cooperation across the region and opportunities for UNEVOC to take a leading role (section X). For example, 'There is significant scope for countries to share their experiences in technical and vocational education. There is need for mutual cooperative assistance between all countries, regardless of their state of
development. Provision should be made at national, regional and international levels for the regular exchange, taking advantage of contemporary information and communication technology, of information, documentation, and materials obtained from research and development, in particular:

(a) publications concerning comparative education, psychological and pedagogical problems affecting general and technical and vocational education, and current trends;
(b) information and documentation concerning curriculum development, methods and materials, study opportunities abroad, employment opportunities including human resource requirements, working conditions and social benefits;
(c) ideas, innovations and new teaching/learning/training materials;
(d) mass media programs of an informational or pedagogical character.’ (para 95)

UNEVOC regional activities include:

7.1 Increased promotion of the role of the Bonn Centre and activities suggested under sections 3 and 4 including the e-forum and web site and database creation (jobs, training and TVET personnel were suggested by the Malaysian meeting participants)

7.2 Increased promotion of the UNESCO Bangkok web site and resources – e.g. ICT and teacher training pages contain a wealth of information of use to all levels of education.

ICT and teacher training web page

Address: http://www.unesco.org/psyd/ict.htm

Funding for equipment and resources is essential to provide TVET opportunities at the level needed in the Pacific.

As with the development and sharing of learning resources, funding for equipment and infrastructure are issues frequently raised in the Asia Pacific region.

Regional UNEVOC action could be to:

8.1 survey the developing countries in the region to establish needs
8.2 seek sponsorship from multinational organisations to fund computers, industrial equipment for workshops etc (e.g. Melinda and Bill Gates Foundation, IBM)
8.3 facilitating the sharing of experiences between countries on process and outcomes of accessing donor funds

8.4 providing assistance to developing countries in seeking funding from donor agencies (e.g. under AusAID Commodities Assistance Programs, Australia is providing the PNG government with a range of essential educational materials including textbooks, science equipment, home economics equipment)

9 Industry/TVET relationships

As a result of the Seoul Congress, the Revised recommendation places significant weight on the relationships between TVET providers and industry. ‘That although governments carry the primary responsibility for technical and vocational education, in a modern market economy its policy design and delivery should be achieved through a new partnership between government, employers, professional associations, industry, employees and their representatives, the local community and non-governmental organizations (NGOs).’ (para 9a) Examples around the world provide models for the region about the importance of establishing a synergy between industry and TVET, particularly relating to

• development of training programs which are responsive to industry needs
• identifying the knowledge, skills and industry required competencies as foundation for curriculum
• work placement programs for students
• school to workplace transition.

The Malaysian meeting recommended that:

- ‘countries collaborate with industry to review and update TVET curriculum development.
- countries strengthen their collaboration with industry to ensure industry input is taken into consideration for subject relevancy of graduates’.

However, these are difficult tasks for many developing countries and regional UNEVOC action could include:

9.1 providing assistance to countries in how to establish these relationships with industry through for example, publication of best practice and workshops that include industry and TVET personnel

10 Relationships with the informal sector and NGOs

The Revised recommendation identifies representatives of non-governmental organizations within each occupation sector, from among employers and workers as well as of the informal economy, small enterprise owners and entrepreneurs as among the relevant stakeholders in TVET.

In addition, the Botswana workshop identified the logical links between unemployment and the informal sector. ‘If you cannot find a job, create one for yourself…. The report of the Botswana National Commission on Education stressed the need for a review of all training for the informal sector, taking into consideration constraints on access and training, appropriate modes of delivery, the training of trainers, cost recovery and cost effectiveness.’

As in Africa the informal sector in the Asia Pacific region is ‘one of the areas of the fastest economic growth, employs the largest number of workers and creates more new jobs per year than any other sector. Yet it is not taken significantly into account by the TVET system, perhaps because of its informal nature. Nevertheless, the sector has great potential for sub-regional co-operation and collaboration in areas such as the sharing of materials, experiences and strategies.’ (background paper).
UNESCO could:

10.1 monitor existing project opportunities to leverage other activities in developing countries. Two examples of such cooperation with other agencies and within the informal sector are the Australian government co-financing projects in PNG.

- The ADB Employment Oriented Skills Development Project aims to improve income earning opportunities for the unemployed and underemployed population in rural and urban areas through the provision of short term informal vocational training and establishment of a Skills Development Trust Fund to fund approved providers of training (joint ADB/Australia/German government project)

- ILO/UNDP/Australian 'Start your own business/Improve your business' project provides training, basic training materials, train the trainer programs for existing small business owners.

Conclusion

As Sir John Daniel, ADG for Education, UNESCO noted recently:

'...the formation of competent human beings and the education of responsible citizens are two facets of a process of education and training that we must see as a totality. Education and training for work are of fundamental importance because it is at work that our roles as competent human beings and responsible citizens come together most intensely.

The real challenge for technical and vocational education and training is local not global. It is, for example, to provide appropriate learning and life skills to rural people so that they can enrich their own environment rather than migrate to misery in the cities. It means bringing opportunities for learning life skills to girls and to others who have not had these opportunities in the past. It means getting the private sector, large and small, north and south to support training for its staff, both on and off the job.' (Inauguration of the Bonn Centre)