

ASIA-PACIFIC SUB- REGIONAL SYMPOSIUM

RE-ESTABLISHING SKILLS DEVELOPMENT FOR EMPLOYMENT, CITIZENSHIP AND SUSTAINABILITY: PRIORITIES AND CHALLENGES

18-19 September 2008
Windsor Hotel, Melbourne

SYMPOSIUM REPORT

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INTRODUCTION

As a prelude to the 2009 World Conference on Education and Sustainable Development, the UNESCO International Centre for Technical and Vocational Education and Training (UNESCO-UNEVOC) (Bonn, Germany), together with the Royal Melbourne Institute of Technology (RMIT) University (Melbourne, Australia) hosted an Asia-Pacific sub-regional symposium on the theme “**Re-establishing Skills Development for Employment, Citizenship and Sustainability: Priorities and Challenges**” during 18-19 September 2008 in Melbourne.

The UNESCO-UNEVOC International Centre operates within the United Nations mandate to promote peace, justice, equity, poverty alleviation, and greater social cohesion. The Centre assists Member States develop policies and practices concerning education for the world of work with a focus on skills development for employability, citizenship and sustainable development.

The Centre is a key component of UNESCO’s international programme on technical and vocational education and training. It also works to support UNESCO’s mandate for

Education for All and Education for Sustainable Development. The Centre achieves this through taking action to strengthen and upgrade the world-wide UNEVOC Network with particular reference to:

- Stimulating international and regional cooperation concerning human resource development
- Promoting UNESCO normative instruments and standards
- Promoting best and innovative practices in TVET
- Knowledge sharing
- Mobilizing expertise and resources
- Strengthening partnerships with other agencies.

The UNEVOC Network of specialised technical and vocational education and training institutions is the most prominent network of the UNESCO-UNEVOC International Centre. It is a unique platform for the sharing of knowledge and experiences regarding all aspects of TVET and consists of more than 270 specialised TVET institutions - called UNEVOC Centres - in 166 UNESCO Member States.

Some UNEVOC Centres are departments for TVET at ministries; others research and development institutes, training institutions or departments concerned with TVET at universities. What all have in common is a position within their country that allows them to cooperate with other TVET stakeholders, both domestically and worldwide.

The UNEVOC Network is the first worldwide network for TVET and therefore has an important and unique role to play. With it, the UNESCO-UNEVOC International Centre responds to the need to develop and strengthen TVET worldwide. Through the Network, knowledge and expertise about innovative and best practices are transferred from one country to another. The Network also facilitates the information flow within countries.

Exchange can occur between UNEVOC Centres that are in need to develop the TVET system and those having knowledge on how to achieve this. It is also possible that UNEVOC Centres facing similar challenges cooperate with the aim to jointly identify and implement possible solutions.

UNEVOC Centres are free to determine the fields in which they would like to exchange expertise. However, they will most certainly exchange information, experience and skills on all major areas of work of the UNESCO-UNEVOC International Centre. In order to facilitate cooperation, the UNESCO-UNEVOC International Centre provides additional tools, such as other networks (e.g. the electronic discussion forum e-Forum and regional cooperation), knowledge sharing and publications, advisory services, and human resource development.

Regional meetings organised by the UNESCO-UNEVOC International Centre – such as this one – is an important way of stimulating co-operation and discussions within the UNEVOC Network. As a key member of the UNEVOC Network, RMIT University has been collaborating for long with UNESCO on issues relating to Education for Sustainable Development (ESD) and Technical and Vocational Education and Training (TVET), and this symposium was the outcome of such collaboration.

OBJECTIVES & OUTCOMES

This symposium had three main objectives:

- To showcase the national and international activities of current UNESCO-UNEVOC centres;
- To expand the number of UNESCO-UNEVOC centres in the region and provide opportunities for VET systems and colleges to learn of ways in which they may engage with other VET providers in the Asia- Pacific, Middle East and African regions; and
- To analyse key issues of concern to VET systems and colleges around the world, including: sustainability, Indigenous VET, globalisation and worker mobility, and the use of IT.

The outcomes of the symposium included:

- An analysis of past and present activities of current UNEVOC Centres;
- A possible expansion of the UNEVOC network;
- An enhancement of the interest and capacity of current and potential UNEVOC Centres to develop supportive partnerships with

the TVET sector in Asia and the Pacific; and

- An increased understanding and systemic and institutional responses to issues relevant to the priority concerns of the UNEVOC network.

PARTICIPANTS

A total of 32 invited participants from 7 countries attended the symposium. They included senior leaders of several current and potential UNEVOC centres in Australia and New Zealand, along with key state and national TVET administrators. TVET scholars and administrators from other countries in the region such as China, Fiji, Japan and Thailand also participated.



PROGRAMME

THURSDAY 18 SEPTEMBER

- 12.00 Registration and lunch
- 1.30 **Official Opening**
Chair: Professor John Fien, RMIT University
- Mr Allan Ballagh, Director of TAFE, RMIT University
 - Professor Annette Gough, RMIT UNESCO-UNEVOC Centre
- 1.45 **Keynote Lecture and Discussion**
An Introduction to UNESCO-UNEVOC – Dr Rupert Maclean, Director, UNESCO-UNEVOC International Centre, Bonn, Germany
- 2.30 **Panel 1: UNEVOC Centre Case Studies**
- Griffith University – Dr Margarita Pavlova
 - Polytechnics International, NZ – Mr Hone McGregor
 - Christchurch Polytechnic Institute of Technology, NZ – Mr Rex Verity
 - Fiji Institute of Technology – Mr Ganesh Chand
- 3.45 Afternoon tea
- 4.00 **Panel 1: UNEVOC Centre Case Studies (cont.)**
- Bureau of Vocational Standards and Qualification, Thailand – Dr Sirirak Ratchusant
 - RMIT University – Prof Annette Gough
- 4.45 **Participating in UNEVOC 1: A Discussion**
- Dr Rupert Maclean
- 5.30 Close
- 5.45 Reception

FRIDAY 19 SEPTEMBER

9.00 **Panel 2: UNEVOC Priority Themes - Key Trends in TVET**

Chair: Prof Annette
Gough, RMIT University

1. *TVET and Sustainable Development – Dr Barry Lan, Canterbury University, NZ*
2. *TVET and Technacy for Indigenous Communities – Dr Kurt Seemann, Southern Cross University*
3. *Globalisation and Labour-Market Mobility – Dr Phil Loveder, NCVET*
4. *Qualifications Frameworks and their Role in Skills Development – the AQF: a Model for Others? – Ms Di Booker, Australian Qualifications Framework Council*
5. *The Changing Status of TVET: From Skills to Empowerment – Dr Margarita Pavlova, Griffith University*

10.45 Morning tea

11.15 **Round-table Discussions based upon Panel Themes (concurrent)**

1. *TVET and Sustainable Development*
2. *TVET and Technacy for Indigenous Communities*
3. *Globalisation, Labour-Market Mobility and Qualification Systems*
4. *The Changing Status of TVET: From Skills to Empowerment*

12.30 Lunch

1.30 **Roundtable Reports**

2.15 **Participating in
UNEVOC 2:** Dr Rupert
Maclean

3.00 **Plenary Discussion and Moderator's Report**

4:00 Close and afternoon tea

PROGRAMME OVERVIEW

OPENING SESSION

The Opening Session of the symposium was chaired by Prof John Fien, RMIT University, who welcomed the participants and introduced the Organising Committee.

Mr Allan Ballagh, Director of TAFE, RMIT University, then spoke on behalf of the Organising Committee. He discussed the diverse range of dual-sector programmes and the highly international student composition at RMIT University, within which the VET curriculum has an important place. He underscored the tremendous practical problem-solving role the VET sector plays in society and how RMIT University is supporting this role in Asia-Pacific region.

KEYNOTE LECTURE

Dr Rupert Maclean, Director, UNESCO-UNEVOC International Centre for Education, Bonn, Germany, began by welcoming the symposium participants. He discussed how UNESCO-UNEVOC Bonn serves as the focal point within UNESCO for UNESCO's contribution to the United Nations Decade of

Education for Sustainable Development (DESD) with regard to skills development for employability. UNESCO-UNEVOC believes that only by providing access to high quality TVET for All, will sustainable development and Education for All be achieved. While education is the key to development, TVET is the Master Key, which opens the doors to poverty alleviation, rising standards of living, greater justice, equity and fairness in our various societies. Dr Maclean mentioned how this symposium in Melbourne offers the opportunity for UNESCO-UNEVOC Centres to meet and to share and review their activities - and for other TVET systems and organisations to learn how they may become contributors to the UNESCO-UNEVOC Network. He also thanked the staff from the RMIT UNEVOC Centre for their leadership and organising this important event.

SESSION SUMMARIES

Overview

During the first day of the symposium, in the session entitled "Panel 1: UNEVOC Centre Case Studies"

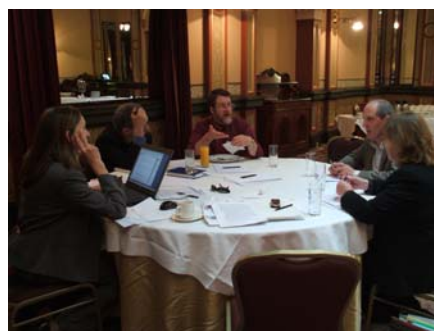
presentations were made by representatives of several key UNEVOC centres, describing the profile, objectives and activities of their institutions. Presentations during the second day at “Panel 2: UNEVOC Priority Themes - Key Trends in TVET” were germane to UNEVOC’s concern for addressing important current issues in globalised patterns of education and employment and its relationship to sustainable development. The panel presentations were followed by discussions on participating in UNEVOC, facilitated by Dr Rupert Maclean. The presentations made at these panel sessions are annexed in a CD-ROM at the end of this report.

Following the panel sessions, roundtable group discussions were convened, each group

dealing with one of the themes included in the Panel 2 presentations. Each group focused its discussion according to the following guideline questions running across all the themes:

- What is happening in your organisation/country/state?
- What should be happening?
- What strategies are needed to make this happen?
- What are the priorities?

The results of the group discussion were presented by rapporteurs from each group, followed by a plenary discussion. The symposium was concluded by a summation by Prof John Fien, who served as the moderator.



PANEL 1: UNEVOC CENTRE CASE STUDIES

GRIFFITH UNIVERSITY –

Dr Margarita Pavlova

In 2005 the Centre for Learning Research became a UNEVOC Centre at Griffith University. In 2007 the Centre became a part of a bigger establishment, Griffith Institute for Educational Research (GIER). As a consequence, GIER, together with the Faculty of Education, became a joint UNEVOC Centre with research and teaching in the areas of adult and vocational education, technology education and education for sustainability.

This summary presents a number of joint activities between the Griffith University UNEVOC Centre, the International Centre in Bonn and other UNEVOC Centres.

Projects and Joint Activities

An international program of cooperation between Griffith University and Zhenjiang Technology Institute of Economy (ZJTIE), Hangzhou Zhejiang Province, China both UNESCO-UNEVOC Centres and UNESCO-UNEVOC International Centre, Bonn commenced at the end of 2006 and focused on international

activities within the framework of the UN Decade of Education for Sustainable Development (DESD). A research project “Developing innovative approaches in Education for Sustainable Development: Curriculum reform in TVET China”, initiated in April 2007, is focussed on facilitating curriculum reform in the TVET sector in China through the development of contextually-based innovative approaches towards teaching and learning of issues relevant for sustainable development (SD). The project involves academics, policy-makers and administrative staff from the institutes in different regions that represent the diversity of TVET contexts within China: western and eastern provinces, developed and less developed provinces, urban and rural areas. The project focuses on researching conditions and approaches required for initiating and supporting curriculum reform in the area of ESD. The aims of the project are:

- To establish a network of 10 TVET institutes involved in the project;
- To incorporate ESD content and develop new teaching

methods within TVET programs;

- To develop a framework/s and guidelines for ESD implementation via TVET.

On one hand, there is consensus among various stakeholders (e.g. business, unions, general public) about the importance of a literate workforce for economic development. On the other hand, there are growing concerns about the relevance of educational systems to the sustainable development needs of many countries. Amongst these is the concern that knowledge, skills and attitudes towards sustainability that are required for employment, and the skills needed to navigate new complex social and political realities are not sufficiently catered for by traditional curricula in the TVET sector. In an era of globalisation and rapid technological innovation, education for sustainability is becoming increasingly relevant to economic and civic participation. Thus, the proposed project is significant as it addresses the above issues.

The project is innovative as it uses different ways of conceptualising the relationship between the level of social and economic development and the teachers' views presented

through education. One of the main benefits of the project for the TVET sector is the identification of sustainability concepts and activities across a number of TVET industries. These would be used within the sector to develop learners' capacity to understand socially significant issues for improving the quality of life and to apply concepts of sustainable development. The benefits are in the identification of learning contents and approaches that TVET could provide to increase students awareness of sustainable development. Another important benefit is related to the conceptualisation of students' attitudes towards SD in the context of their current studies and future employment, and the identification of the main pedagogical issues within this learning.

Participation at the Virtual conference on TVET and sustainability (2007) "Two pathways, one destination: TVET for a sustainable future" organised by the UNESCO-UNEVOC International Centre in Bonn, was an important event contributing to the projects at Griffith University.

Other projects include:

- Development of ICT tools for education for sustainable

development in the context of technology education and vocational education at the secondary school level (Baltic States region) UNESCO-UNEVOC International Centre;

- Current issues in TVET: South –East Europe: Case studies of 7 countries: Republic of Macedonia, Lithuania, Romania, Slovenia, Montenegro, Bulgaria, and Croatia.

Dissemination of Results

This is carried out through Commissioned papers; Invited keynote addresses; Conference and Seminar presentations; Publication of books and book chapters and in refereed journals.

Future Plans

- Professional Doctorate and Masters in TVET at Griffith;
- Collaboration in East Timor to set up a program for skills development for employability (“soldiers back to society”) and eco-tourism;
- Focus on strengthening involvement into the regional UNEVOC network.

POLYTECHNICS INTERNATIONAL, NZ –

Mr Honè McGregor

Who is PINZ?

Established by New Zealand’s Polytechnics in 1993.

- Purpose was to coordinate the sector’s international activities;
- Work in international development by drawing on expertise and resources of Polytechnics;
- And marketing the capability internationally.

Umbrella organisation for NZ’s government tertiary institutions:

- Institutes of Technology & Polytechnics (ITPs);
- Universities of Technology/ other Universities.

PINZ manages the NZTEC project with NZ universities.

PINZ’s Work

Key outcomes:

- Contributes to national HRD strategies;
- Produces employable graduates;
- Improves qualifications relevance & industry links;
- Creates pathways/systems for life long learning;
- Builds strategies for knowledge economies;

- Ensures world class standards.

PINZ: New Zealand's Centre for UNEVOC

We are developing partnerships, programmes and activities based on the UNEVOC key focus areas of:

- Information exchange, networking and international cooperation;
- Support for capacity building, including human resource development and staff training;
- International and regional cooperation in the field of technical and vocational education and training;
- Facilitating inter-agency collaboration.

PINZ UNEVOC Case Study: Saudi Arabia TVTC

PINZ is working with the Saudi Government's UNEVOC, Centre the Technical & Vocational Training Corporation (TVTC). Both agencies (PINZ & TVTC) represent the majority of the TVET sector in our two nations. The UNEVOC focus areas have been used as a framework for this collaboration initiative.

Case study key objectives:

- Develop an understanding of each country's national qualifications and quality assurance systems and registers;
- Adopt joint training programmes for trainees and administrators of training centres and institutions;
- Conduct research and technical studies which would help in carrying-out areas of cooperation included in this programme;
- Encourage hosting joint conferences, workshops for trainees, trainers and institutions' administrators;
- Exchange experiences in technical areas to allow implementation of training programmes and to conduct studies and consultations.

Steps in the project include:

- Cooperation Arrangement MoU – agreed 2007;
- Recognition of qualifications – Phase 1 achieved 2008;
- 2+2 staff exchanges & internship programmes – started 2008;
- Collaborative research projects – beginning 2009;
- Joint symposiums (inter-agency collaboration) – Jan 2009;

- Running a collaborative TVET institution together – 2010.

Where to from here?

PINZ working in partnership with other UNEVOC centres, govt agencies and institutions on:

- TVET institution establishment and operation;
- TVET institution support;
- TVET capacity building;
- TVET policy development.

CHRISTCHURCH POLYTECHNIC INSTITUTE OF TECHNOLOGY (CPIT), NZ

– *Mr Rex Verity*

Background

- Largest Institute of Technology in the South Island of New Zealand;
- More than 13,000 students;
- Over 1600 full and part time staff (equivalent to more than 600 full-time staff);
- One industry advisor for every 3 staff;
- Over 3,000 courses, 13 degrees, 160 qualifications;
- Applied and academic subjects – Trades through to Creative Industries, Humanities, Health & Science, Te Puna Wanaka (Maori Studies),

Engineering, IT and Commerce;

- Broad study levels - foundation programmes, pre-trade, certificates, diplomas, degrees;
- Undergoing severe retrenchment and restructuring (840 FTE staff down to 600);
- Any focus on UNEVOC priority areas is coincidental and driven by CPIT's commitments to biculturalism and sustainability and a need for financial viability.

Internationalisation

- Fosters an organisation-wide, global perspective;
- Has a diverse range of international linkages (including offshore delivery, articulation arrangements and increased learning experiences for staff and students) for a wide range of countries (including China, Japan, Korea and Saudi Arabia) and targeting government, corporate and industry education and training markets ... for the academic and financial benefits to CPIT;
- A commitment to provide the best possible study and services environment for students for whom English

- is not their first language (more than 1400 international students from 50 different nationalities);
- International qualifications e.g. City and Guilds, CELTA;
 - CPIT was an Export Award winner in 2005 for its internationalisation programme.

“Indigenous VET”

- Fosters a culture and environment that supports learning by Maori (and Pasifika peoples) and about Maori (and Pasifika) knowledge and skills;
- Has a kaupapa Maori professional development plan for all CPIT staff; all tenured staff to complete at least one PD option in te reo, tikanga or using appropriate pedagogy in course delivery;
- Provides opportunities in CPIT programmes for Maori to connect and engage with the subjects and courses by developing kaupapa Maori within courses and qualifications using appropriate Maori pedagogy, language, culture, exemplars and models.

Sustainability and Environmental Awareness

CPIT is committed to developing strategies and programmes that enable it to model sustainable practices, supporting its institutional objectives and contributing to the best of its ability to the long-term wellbeing of its community. This is expressed through CPIT’s four **guiding principles** for sustainability and environmental awareness:

*(The strategies highlighted in **green** are considered key for the 2009 planning cycle and are prioritised for funding.)*

1) Minimising CPIT’s ecological footprint

- a) Continually reduce CPIT’s environmental impacts through the development and implementation of sustainability best practice;
- b) Mitigate environmental risk;
- c) Continually improve the efficient and economical use of resources;
- d) Progressively reduce the use of non-renewable energy and materials;
- e) Work to achieve carbon-zero status;**
- f) Work to achieve zero-waste-to-landfill status;
- g) Aspire to best practice sustainability in the building

- and maintenance of the physical infrastructure;
- h) Continually improve the energy and resource efficiency of course delivery.

2) *Increasing the quality and quantity of education for sustainability*

- i) Progressively integrate sustainability principles and practice into educational delivery;
- j) **Develop, promote and deliver relevant education focussed on specific aspects of sustainability**
e.g. Courses in outdoor education and recreation studies, Maori studies, architecture and interior design, the course developed by the CPIT & Otago Polytechnic Schools of Midwifery and the context and examples being developed in the trades training schools.

3) *Growing community (social capital) for sustainability, raising levels of awareness, knowledge and skills*

- k) **Develop an institutional culture that will increase environmental and sustainability activity.**

4) *Building practical partnerships for sustainability*

- l) Establish CPIT as a preferred provider of environmental awareness and sustainability knowledge and skills for the Canterbury region
Establish strategies to promote and enhance partnership with Maori on environmental awareness and sustainability;
- m) Increase public awareness and acknowledgement of CPIT environmental awareness and sustainability activity.

Staff development for Sustainability

Main objectives:

- Attitudinal and behavioural change;
- ‘Greening’ courses across the campus;
- Embedding in all operations (academic & allied staff).

Staff promotion process

- Appraisal: “sustainability” as part of professional development.

Teaching curriculum

- Allied staff conference options;
- Embedding sustainability & environmental awareness in

all Certificate of Adult Teaching courses;

- Staff development workshops.

Workshops for staff development in sustainability

\$ resourcing for 25 x PD days in 2009

- Designed 2-day course:
 - Format: modelled on successful [Treaty of Waitangi](#) workshops, and
 - [Pachamama Alliance](#) *Awakening the Dreamer* workshop.
- Oct 2008: trial run with educational developers;
- Jan 2009: launch in with key decision makers.

Objectives:

- Attitudinal and behavioural change;
- Embedding in all courses across campus and in all operations (academic & allied staff).

Collaborative effort:

- CPIT Staff Development team;
- Environmental Manager / Sustainability Advocate;
- Dean of Te Puna Wanaka Faculty;
- EFS in the BRecEd action research group;
- NZ School of Broadcasting;
- CEO.

Outcomes:

- Analyse and discuss patterns of human civilization and investigate some of the factors that contributed to their success or decline;
- Analyse and discuss how main stream cultural myths obscure the reality of unsustainable values and behaviors (including economics and free market, consumerism, equality, globalisation, colonization);
- Predict the future given a range of current trends (including utopia and dystopia);
- Analyse and discuss the mechanisms behind a successful social movement to bring about change in NZ;
- Reflect upon personal impact on the environment and develop a strategy for minimizing that impact.

Teaching methods

- Games and experiential learning;
- Group work, discussion, collaboration, presentation;
- Integrated approach to problem identification and problem solving;
- Critical inquiry, reflection, thinking of the future, discovery, generating solutions;

- Generating commitment to taking personal action.

Importantly, course participants learn that it is not all or nothing ... that millions of small decisions lead to big changes in the long term ...

FIJI INSTITUTE OF TECHNOLOGY – Mr Ganesh Chand

Mission Statement

To provide a broad spectrum of high quality, internationally-recognized post-secondary programs of study in technical and vocational education and training that are responsive to the needs of the industry, the marketplace and the non-formal sector of employment, placing emphasis on excellence and equity.

Actions

To achieve the vision and expectation of the government FIT has undertaken significant reforms. The aim is to ensure that FIT responds to the needs of industry in a timely manner.

Changes Made – To Leap into the New Frontier

- FIT ACT 2006 in effect now;
- Introduction of Faculties:
 - Commerce, Hospitality & Tourism
 - Humanities,

Communication and Creative Arts

- Applied Sciences, Engineering and Maritime Studies;
- Introduction of more academic ranks (3 to 10);
- Emphasis on research & consultancy work;
- Improve facilities within the Institute;
- Considering entering into collaborations with other institutions;
- Introduction of more programs to the outer campuses;
- Introduction of new programmes (eg horticulture).

Issues

1. Most Critical: HR needs for Fiji:
 - So far no HR planning at national level;
 - FIT has proposed to govt to allow it to do HR plan for FIJI;
 - Estimated budget: \$0.75m per year;
 - Funding an issue.
2. TVET must not be isolated from the National HR Plan.
 - Govt: planning massive investment in TVET for secondary schools;

- However: Massive investment in TVET at the secondary school level without analysis of the job market will quickly frustrate students/parents.
- 3. Quality issues: ensuring quality of TVET is vital for credibility.
 - Legislation on NQF just approved by govt.
- 4. Delivery & Sustainability issues.
 - Student perception of their image (psychological issue);
 - Perception of students in 'academic' streams of TVET students?
 - Perception of parents?
 - Perception of employers?
- Multiple exit means: Exit points range from: craft certificates, trade certificates, diplomas, advanced diplomas and degrees;
- Multiple location means: FIT presence throughout the country for face to face education:
 - To some extent complemented by distance education;
 - Increasing presence in the South Pacific (FIT already has programmes in Marshall Islands and Tonga; the range of programmes + countries to be expanded from 2009).

INCREASING ACCEPTANCE OF TVET BY PARENTS & STUDENTS NOW (especially after labour mobility gains becoming a public issue).

The Way Forward

FIT's philosophy now:

- 'Multiple entry, multiple exit, multiple location' provider of technological education;
- Multiple entry means: Entries at different MQR levels – from Form 4 & 5 upto degree;

Immediate Plans

Commence new programmes (2009):

- Certificate in Horticulture
- B.Ed (TVET)
- B. Applied Science (Env. Stud)
- B.Com

Challenges

Labour Mobility: Fiji is rapidly losing skilled workers to Aust, NZ, US and Canada.

Issues:

- Should Fiji taxpayers fund education/training for citizens who aim to migrate

as soon as they can?

- Convention on TVET 1989 in light of permanent labour mobility and funding constraints in worker source countries;
- Role of receiving countries in ensuring quality TVET in Fiji;
- Role of international organisations in ensuring quality TVET in Fiji.

**BUREAU OF
VOCATIONAL
STANDARDS AND
QUALIFICATION,
THAILAND** – *Ms Sirirak
Ratchusant*

TVET in Thailand has been developed and progressed in the present. OVEC is the main organisation to organise the TVET and it is committed to serve the labour force, facilitate poverty alleviation, promote self employment and raise the quality of life, and maintain standards of vocational education. The Sustainable Development Concept is integrated in the system of TVET in OVEC.

TVET is targeted in the quantity and quality of specialised manpower, craftsman, technician and technologist in the area of production and services. These are related to the need and

strategy of potential development for the country's competitiveness. Occupational competencies and skill needs are accomplished by the four keys strategies: Increase TVET Participation, Social Services, Research Innovation and Entrepreneurship Development, and Quality Improvement. Each of the four strategies can be broken down into many topics that can be used for planning and leading to the next process. OVEC is the coordinator and the colleges will represent the performance.

According to those strategies it can be expanded to important issues as the following.

Increase TVET Participation includes Flexibility; TVET in Secondary Schools; Articulation, Accreditation and Recognition of prior learning; Partnership; Earning while Learning; Increase Opportunities; ICT and distance learning.

- **Social Services** are Poverty Alleviation; Fix It Center; Learning Pathway; Social Lap; Partnership and Environment.
- **Research Innovation and Entrepreneurship Development** includes Strengthening Staff Capacity; Changing the Paradigm;

Networking & Partnership;
Enhancing Knowledge
Management; Development
Linkages with industries and
Indigenous knowledge;
Organising Skill
Development in Research;
and Entrepreneurship for
TVET Students.

- **Quality Improvement** includes Providing three tracks as alternative to TVET programmes; Learning by Doing; Quality Assurance; Standardisation; Networking and Partnership; Knowledge Management System; Competency Based Curriculum; Career part / Vocational; and Providing Qualification for e-learning.

The supporting projects and activities can be related to four main targets: Development Skills for Employability; Fostering New Entrepreneurship or Self Employed Workers; Serving Society/ Local Community; and Conducting Research for New Knowledge and Innovation/ Technology. For example, under Serving Society / Local Community is the project “Fix It Center” - OVEC has worked with local agencies in setting up a “Fix It Centre” in rural areas. The purposes of these centres include:

- Integration of occupational training in specific areas by working cooperatively with other agencies;
- Providing skills needed for earning a living in rural areas;
- Providing advice and coaching in needed occupational areas;
- Distributing information on skill training opportunities.
- Organising mobile training units for remote areas;
- Topping-up technology on “One Tambon, One Product (OTOP)” concept.

This includes those organisations that have been selected for sustainable development through TVET. Anyway, all are integrated in teaching-learning procedure under the quality of TVET.

The three main TVET standards of OVEC are: Occupational Standard or Competency Standard approaching to Vocational Qualification; General Vocational approaching to General Vocational Education Qualification; Institute Standard or Vocational Education Standard approaching to quality of colleges by the procedure of Quality Assurance.

The competency based curriculum is developed from Competency Standard and added

life skill and general academic to be General Vocational Education Standard. When the students finish the course, they have to be tested for passing the General Vocational Standard of their field by the committee of the colleges in each province. This procedure is student internal quality assurance. If Thailand accomplishes in establishing the National Qualification Standards and the Institute of Vocational Qualification, the system of Quality in Vocational Education and also in competitiveness of the worker will better. Each organisation works for their qualification framework, but do not complete for combination. The Institute Standard or Vocational Education Standard for Internal Quality Assurance includes 6 standards and 34 Indicators. The 6 standards are: Students and the Graduates; Curriculum and Teaching Learning Resources; Students Activities Developing; Innovation and Research; Social Services; and Leadership.

The Nine Types of TVET Courses are: Industry; Agriculture; Home Economics; Arts and Crafts; Commerce and Business Administration; Fishery; Textile Industry; Tourism and Hospitality; and Information Technology. Under

these types of courses, there are many branches that are specific in occupation such as Automobile, Gem & Jewellery and Accounting. Starting from 2009, the programmes of study are Short-course Vocational Training, Certificate in Vocational Education (3 years after lower secondary level), Diploma in Technical Education (2 years after Certificate level / 2-3 years after upper secondary level), Higher Diploma in Technical Education or Bachelor Degree (3 years after Diploma in Technical Education) and Bachelor Degree in Technology (2 years after Diploma in Technical Education).

The Vocational Education Development Guides have been developed for:

- Driving National Qualification Framework;
- Developing Competency Based Curriculum;
- Developing media, innovation, laboratory, school in the factory, factory in the school, software house;
- Participating in establishing the system of vocational qualification and Occupational standards or Competency standards;
- Developing the system of participative management;

- Developing the image of vocational education quality;
- Providing and developing personnel potential cooperative with entrepreneur in country /aboard/Commission on Higher Education;
- Establishing the Institute of Specific Area by organizing the colleges, for example: Institute of Petrochemical, Institute of Rice and Institute of Goldsmith and Jewellery under The Vocational Education ACT.

However, the success of TVET will depend on the cooperation of the TVET Organisations in Thailand and in others countries.

RMIT UNIVERSITY – *Prof Annette Gough*

RMIT has been a UNESCO-UNEVOC Centre for some time – since at least 2001 but I understand it may date back to the mid 1990s. However, I have only been at RMIT since May 2005 so my knowledge of the activities prior to this time is only what I have been able to find on the RMIT website.

Activities 2001-2004

RMIT UNESCO-UNEVOC activities in this period were mainly focused around the

involvement of staff in what was then the Post Compulsory Education and Training Centre in the Faculty of Education. Unfortunately none of these staff are still at RMIT to provide further details of these activities:

- Study Tour for Kazakhstan Mobile Training Team in Vocational Education Management and Training. Participants were from the National Observatory of Kazakhstan (NOK), a UNEVOC Centre, 2001.
- TVET Quality Management Workshop, Alstana, Kazakhstan, 12-13 June, 2001. The objectives of the workshop were to:
 - Create awareness of innovative management approaches based on the results of study visits by MITT members to Australia and Thailand;
 - Agree on approaches to and recommendations for further improvement of VET quality management appropriate to the Kazakhstan context;
 - Define next steps for follow up activities;
 - Discuss the draft policy paper developed by the “Soros-Kazakhstan” Fund work group;

- Study Tour for the Mobile Training Team on Innovative Practices in Vocational Education and Training and Professional Development. Participants were from the Western Visayas College of Science and Technology (a UNEVOC Centre) and the Carlos Hilado Memorial State College, 2002;
- Professional Development of Vocational Education Workshop in Iloilo, Philippines, 27-30 August 2002;
- Improving Management and Delivery of Technical and Vocational Education through the Application of Information and Communication Technologies. Report on the outcomes of a project's planning meeting conducted in Chiang Mai, Thailand, 9-10 February 2004.

Activities 2005-2008

The RMIT Centre was re-activated in 2006. The first major activity of the Centre was a seminar at RMIT's Vietnam campus on "TVET for Sustainable Development – Opportunities and Challenges":

- About 70 technical and vocational education and

training (TVET) experts from around Asia and several European countries gathered at RMIT's campus in Ho Chi Minh City, Vietnam, from 2-5 July 2006 to synthesise and extend current examples of international best practice in reorienting TVET for sustainable development.

- This international conference was a contribution to the UN Decade of Education for Sustainable Development. It aimed to emphasise the importance of TVET for sustainable development as a key part of the agenda to be followed during the UN Decade.
- In particular, the discussions focussed on:
 - Reviewing the nature, purpose and scope of development and sustainable development and the relevance of the changing international discourse for TVET;
 - Analysing invited case studies of best practice in reorienting TVET for sustainable development;
 - Analysing the opportunities for, and challenges to, reorienting TVET for sustainable; and

- Identifying strategies for building capacity in reorienting TVET for sustainable development.

The second major activity was this symposium on “Re-establishing Skills Development for Employment, Citizenship and Sustainability: Priorities and Challenges” held in Melbourne on 18-19 September 2008.

Other activities now associated with the RMIT Centre are

- John Fien’s ongoing involvement with UNEVOC activities in Bonn and a range of related projects;
- Stephen Duggan’s TVET work in Mongolia since 2006;
- Annette Gough’s involvement at a UNEVOC regional seminar on school to work transition in Tokyo, Japan, 23-30 January 2007 and other connections.

In addition, Dr Rupert Maclean, Director of the UNESCO-UNEVOC International Centre in Bonn was appointed an Adjunct Professor in the School of Education.

Activities 2009 and beyond

RMIT intends to have a major focus on 2 of UNEVOC themes:

- Teacher Education
- Sustainability (ESD)

These will be developed through a UNESCO-UNEVOC Regional Seminar on TVET Teacher Education for Sustainable Development at the RMIT Ho Chi Minh City campus in 2009. Building on the outcomes from previous seminars, the objectives of the seminar are:

- To map key sustainable development concepts for inclusion in TVET teacher education programs;
- To identify current and new approaches to TVET teacher education that address sustainable development;
- To elaborate strategies for strengthening the contribution of TVET teacher education programs towards sustainable development;
- To advise the UNESCO-UNEVOC International Office on future regional activities to support TVET teacher education towards sustainable development.

In addition, The RMIT Centre is working towards being a regional centre of excellence in TVET Teacher Education. TVET teacher education is a strong component of the operations of the School of Education and we would like to champion and share this expertise throughout the region.

PANEL 2: UNEVOC PRIORITY THEMES – KEY TRENDS IN TVET

TVET AND SUSTAINABLE DEVELOPMENT – *Dr Barry Lam, Canterbury University, NZ*

Is education for sustainability a tipping point for change in technical and vocational education and training?

The impact of the climate change debate aligned with increasing environmental, social, economic and political issues confronting the global community has caused educators in many countries to review curriculum and qualifications in light of increasing concern that resources cannot outstrip the ability of the planets provision.

One of the main arguments behind the climate change debate is based on key systems (atmosphere, water, biodiversity, geophysical) not being in balance. Earths systems are interdependent and what happens in one area affects all the others. Human beings are totally dependent on a range of species in different ecosystems to keep the earth systems functioning, as human beings we are not separate from these systems, we are interdependent. Therefore, it is essential that we look after the earth's ecosystems

if our children and their children are to have a future on this planet.

As a consequence there is a need for education institutions to provide opportunities for more integrated understandings associate with sustainability, enterprise, citizenship and globalisation to help learners become more connected. It is essential that learners understand that we must allocate resources only on a basis of renewal (the earth's capacity to cope and replenish itself).

To achieve this goal we must review our lifestyle choices. Sustainability is as much about ecosystems protection as it is about changing our lifestyle choices. We live on a planet with only so much land, air and water. The damage we do to the planet affects us all and limits the availability of natural resources for future generations.

As a result, tertiary providers need to take greater responsibility for providing opportunities to educate students for sustainability through a range of courses and qualifications. To achieve this "education for sustainability will require people

and organisations to redesign many systems and established ways of doing things to achieve a good quality of life for people far into the future” (2004, PCE Office, NZ).

Furthermore, if more education is to save us, it would have to be education of a different kind: an education that takes us into the depth of things” (E.F. Schumacher). Education of a different kind will involve both a re-design of qualifications to include sustainability and a change in how we learn. Learning that take us to the depths of things will require a critical perspective, one that looks at the things that confine and distort our ability to change. Changing education to incorporate sustainability is all about quality not quantity, it is not about adding more, but how we package and facilitate learning in an interdisciplinary approach.

The knowledge to navigate (combining process and content) is becoming essential due to technological advances combined with rapidly changing environmental conditions and the need to share knowledge and work cooperatively. What types of knowledge will be required for a sustainable future is more often a cause for debate and research. Currently technical and

vocational education and training institutions are educating for an unknown future. Therefore, it is essential to consider both the content and process objectives behind the notion of the knowledge to navigate when planning future vocational education programmes.

Tertiary Example

The Otago Polytechnic in New Zealand is trying to provide education of a different kind, and one that is grounded in a vision of a sustainable future and addresses the knowledge to navigate. The polytechnic is currently engaged in a process of re-orientating all its current qualifications to include education for sustainability and promote more integrated and action based approaches to learning. A critical aspect of the Otago Polytechnic process has been finding the right people to bring about this change.

Large change of this magnitude in a tertiary institution is not easy and it has required a whole staff approach from senior management to lecture and support staff level. The process has not been perfect, the learning curve has been steep, but the rewards are starting to emerge.

Once the education for sustainability re-orientation process was approved by academic board in 2007 the implementation occurred immediately in most areas. However, several departments have taken a more measured approach and in one or two areas it has been exceedingly slow.

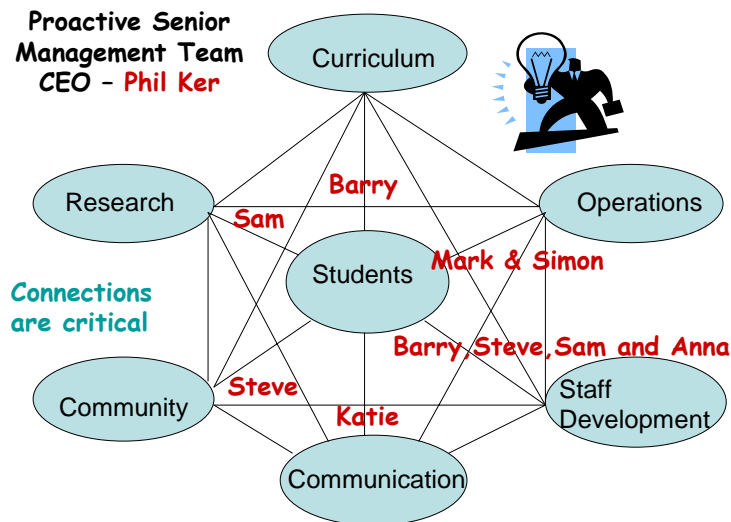
The approach to sustainability has three key aspects

1. Re-orientation of the teaching and learning process to incorporate sustainable practice;
2. Creating a sustainable campus;
3. Operate a centre for sustainable practice.

The work has been guided by the CEO (Phil Ker) and a senior management team.

The students are at the centre of developments and key strands are used to provide a connected and holistic approach. Key people working collaboratively are responsible for particular strands bringing a coherent and connected approach together across the institution.

In May 2008 each department at the Polytechnic was required to present progress to academic board outlining how they had incorporated the sustainability vision. This was immediately followed by stocktaking in June to identify to what extent the vision was embedded, and where



Otago Polytechnic Education for Sustainability Strands

future support was required to assist departmental progress.

The Otago Polytechnic have engaged in sustainability because they are acutely aware that in the workplace there is a shortage of graduates with qualifications in sustainability and in many case students/people with these qualifications are currently in demand. The Polytechnic is also aware of the synergy between the NZ tertiary education strategy and the key objectives of sustainability. While there is not a direct translation there are important aspects which include; learning and research contributing to the sustainable economic and social/ cultural fabric of NZ, strong connections between tertiary education organisations and the communities they serve and building shared understandings about sustainable practice.

Business Example

A current workplace example is Untouched World, a fashion business in New Zealand that has been awarded the UNESCO Decade for Education for Sustainable Development logo for its commitment to sustainability. This is a leading fashion design company that has a long track record in New Zealand associated with sustainability. As a result, they

are keen for new staff appointments to arrive with an understanding of sustainability so they can participate actively in the sustainability agenda that underpins the UW business model. Currently they are engaging in a 360 degree review of the business to further extend their progress towards sustainability.

A matrix model has been used to provide the data for the 360 degree review process. The matrix involves an in-depth examination of past, current and future business practice that reflects environmental, social, economic and political decision making. The review involves a full review of all supply chain partners and the implementation of a staff education programme to increase staff understanding of sustainability.



TVET AND TECHNACY FOR INDIGENOUS COMMUNITIES

*– Dr Kurt
Seeman, Southern Cross University*

When we look at the planet from space at night we see immediately where the developed world consumes most of its generated power. These are the areas ‘lit up’ on our continents. They are the areas most urbanised, dense with sophisticated technological systems and where most of the wealth is consumed. What is worth noting, however, is not the wide coverage of this lit up area, but where and how much land mass is left in the darkness. It is in these dark areas where we find both our key challenges as well as fresh ideas for how to redress global sustainability through a holistic basis to technology education. These ‘dark’ areas not only provide the energy resource to light up and feed the urban economy, but also offer a rich and diverse source of new ideas from indigenous peoples, whose knowledge can help the world innovate towards sustainable technological development and education.

Most of the world’s resource industries mine in these ‘unlit’ areas of our continents. They are typically sparsely populated

with many small scale communities in rural and remote regions and in many cases, arid climates. Further, they are often refuge for the world’s remaining indigenous and developing cultures. As the world debates its sustainable future, all the while continuing to grow in its urban consumption for food and fossil fuel intensive technological systems, the ecological and social pressure will continue to bear upon the ‘unlit’ land mass for physical and, it is asserted, also conceptual solutions.

The scenario where the source for supplying much of urban fuel and food is from sparsely populated remote areas occupied in many countries by traditional and indigenous peoples, indicates that the developed world must inevitably address the way it engages with those areas and cultures. Significantly, we also find that these areas not only are sources for fuel, but also for ideas. It is asserted, that exchanging knowledge across cultures on how to understand technology reveals universal characteristics of technological actions that offer new systemic frameworks for innovation towards sustainable technological development.

The holistic framework of technacy education is an example

of a new educational model for thinking through technical learning. It has proven to be both universal in its principles and inspirational to many mainstream urban and indigenous teachers and students alike.

The paper explored how arid and indigenous cultural groups living across 80 percent of the 'unlit' land mass of arid Australia approached technological knowledge that emphasised a holistic and systemic frame of reference. This holistic understanding of technology has since been captured in the Australian dictionary as technacy. Technacy is the view that all technical actions are necessarily interdependent systems that combine human agency including values and organization, tools and eco-resources together towards an initial purpose in mind. And importantly, it is a view that holds that all technical challenges find their sustainable solutions based in understanding the key contextual factors that need to be satisfied for the innovation to be functionally, ecologically and socio-technically sustainable.

Recently, the study of technacy and innovation was introduced to mainstream teachers located in Australia's coastal regions.

Ten schools participated in an 18 months technacy and innovation program for sustainable development delivered to middle school children. Following a thorough study of technacy across cultures and in the classroom, 27 Aboriginal and Non-Aboriginal teachers working with over 300 middle school children concluded that the ideas underpinning technacy education for sustainability offered demonstrably superior ways of learning. They were so affected by the experience they formed in June 2008, in central Australia, an extraordinary collegial pledge, that resulted in what has become known as the Alice Springs Declaration:

We educators and learners hereby declare that:

- "We will foster and advocate technacy and innovation capability across curriculum and in teaching practice, in the interest of our common sustainable future."
- "We also acknowledge inspiration from desert people's ingenuity and the relationship between people, technologies and our environments that as a system offers both ideas as well as challenges for assuring intergenerational fairness."

To conclude, the paper presented a case where increasingly, the developed cultures located in the 'lit up' areas of the world, were increasingly dependent on the 'unlit' areas of the world for their existence and lifestyle. And that this scenario presented a key requirement to not only manage those vast and sparsely populated land masses, but also work with the often indigenous cultures that live in those 'unlit' areas to help formulate new ways of thinking that can benefit the world. The example given was the new thinking behind technacy education.

In summary, this paper asserted that:

1. Sustainable actions will increasingly require innovation
2. Innovation is not easy, and demands perception change and frontier attributes (State VET providers are inherently slow at teaching, experimenting with, or handling the pace of new knowledge systems, especially in valuing indigenous knowledge)
3. Globally, innovations in sustainability will increasingly need to work with and invest in indigenous ideas, many

derived from desert and remote areas. The West is in need of new paradigms.

4. Holistic Technacy education came from such desert cultures and offers new ways to think technologically.



GLOBALISATION AND LABOUR MOBILITY – *Mr Phil Loveder, NCVET*

Globalisation is a phenomenon which means different things to different people, but can be roughly distinguished as having three key phases:

- Phase 1: the mobility of capital;
- Phase 2: the mobility of goods (and, increasingly, services);
- Phase 3: the mobility of people.

Each of these phases poses distinct challenges for TVET, in terms of adapting to:

- Economic restructuring, as nations adjust to their areas of comparative advantage;
- Competition in education markets as citizens seek the best educational opportunities, and foreign education providers enter the market;
- Entry and exit of skills embodied in people due to migration flows (from Cully, 2006).

Global Factors and Trends Influencing Demand for Skills

Many countries, especially in the developed world, now have ageing societies. In Australia for example, it is expected that in 30

years time (say 2030) there will be just two people of working age for every person 65 years of age and over (Hudson Consulting, 2004). The forecast workforce and skill shortages are expected to generate heightened competition for skilled, experienced and able employees. Migration has been an integral part of human development for millennia. However, the scale of these movements has increased exponentially in the post-war period – and has focussed more particularly on the movement of skilled labour. The United Nations estimated, for example, that 175 million people were living outside their country of birth at the beginning of the twenty-first century. This number is expected to increase to 230 million by 2050! (UNFPA, 2008).

Labour market mobility has winners and losers too, with a ‘brain drain’ observed to receiving nations to the detriment of donor countries. Increasingly, countries are competing actively for the same skilled people and this is creating imbalances in economic development across countries and regions.

There has been a shift from an ‘information’ to a ‘knowledge economy’, essentially a shift in

focus from the information and communication industries as a driver of economic growth to one where information and communication technologies are increasingly deployed across all areas of industry. The growth of the 'knowledge worker' in particular has seen the need for the development of 'new skills for new jobs'.

Increasingly, people require skills that are portable and transferable and which can be recognised across national borders. In fact, the development of qualifications systems that can accommodate skills and qualifications acquired in other countries are being seen as a key part of trade diplomacy. In some regions of the world, (particularly Europe through the Copenhagen process), efforts are afoot to re-align qualifications frameworks to become regional in nature.

The move toward internationalising curriculum which takes into account a 'wider view' of the world and aimed at preparing all students for performing professionally and socially in a global context is becoming increasingly important both in terms of good global citizenship and plain good business!

In line with the growth of the knowledge economy there has

been an increase in the relative importance of high-level qualifications. These qualifications (usually above the Australian Certificate IV level) are seen as integral to continued economic prosperity. Examples of higher-level qualifications include foundation degrees in Britain, professional degrees and 'Advanced VET' in Scandinavia and vocational graduate certificates and diplomas in Australia.

On the other hand, there is an equally important trend toward recognising skills acquired through informal and non-formal learning. The Organisation for Economic Cooperation and Development (OECD) ('lifelong learning for all') as well as UNESCO ('learning for all') both highlight the importance of TVET systems developing appropriate processes for recognising informal learning as an important step to promoting learning and workforce participation for all.

Challenges for TVET

Firstly, the globalisation of education is resulting in ever greater competition from other countries to attract the 'best and brightest' students and will continue to be a challenge for TVET institutions – as will be

balancing the needs of the domestic and international markets.

There are clearly a whole range of issues around the recognition of qualifications and transnational quality assurance strategies which require local, national and regional approaches.

The clients of TVET are changing too; which will mean the qualifications we deliver now will increasingly need to have relevance to other country's contexts in the future and meet their own unique economic and industry objectives.

With new learners comes the need to adopt different teaching and learning strategies, especially for people from different cultures with different underpinnings of knowledge. For many learners, their only previous experience with education and training has been through informal processes; and these experiences will increasingly need to be incorporated into the more formal system of skills development if these learners are to be fully effective in the modern labour market. Finally, all of these trends and challenges have a significant professional development need attached to them; and TVET

practitioners need to be provided with ample opportunity to develop skills for coping with a rapidly changing world.

References

- Cully, M (2006) Globalisation and technical and vocational education and training in Australia.
- Hudson Consulting (2004) The Ageing Population: Implications for The Australian Workforce.
- United Nations Population Fund (2008) Population issues; Meeting development goals (sourced at: <http://www.unfpa.org/pds/facts.htm>, September, 2008)

QUALIFICATIONS FRAMEWORKS AND THEIR ROLE IN SKILLS DEVELOPMENT - THE AQF: A MODEL FOR OTHERS?

– Ms Di Booker,
Australian Qualifications Framework Council

A qualification system underpins a country's ability to skill its people for employment, citizenship and sustainability and includes all aspects of a country's activity that results in recognition of learning:

- Policy;
- Institutions providing courses and assessment;

- Quality assurance;
- Assessment processes;
- Awarding authorities;
- Skills recognition processes;
- Links to labour market and society.

‘One feature of a qualifications system may be an explicit framework of qualifications.’¹ (OECD 2007). This is optional, but it would appear that there is good evidence in the literature and international experience that there are benefits for users and stakeholders – the qualification system is often complex, non-transparent and fragmented while a framework has the opportunity to make levels explicit and provide transparency for access, transfer and progress.²

The OECD³ identifies two key roles for a qualifications framework:

- As an instrument for the development and classification of qualifications according to a

set of criteria for levels of learning achieved; and

- As a basis for improving the quality, accessibility, linkages and public or labour market recognition of qualifications within a country or internationally.

Qualifications Frameworks Around the World

1. Europe

The EQF was adopted by the European Parliament and Council in December 2007 with a process of implementation commencing in 2008. It has been described as a ‘meta-framework and has the purpose to act as a reference for the different qualifications systems and frameworks in Europe.’⁴

The key driver for the EQF has been the Lisbon objectives of ‘making Europe more competitive whilst ensuring social cohesion, and underpinning the European employment strategy.’⁵

¹ OECD 2007 *Qualifications systems: bridges to lifelong learning* Paris p179

² Coles, Mike 2006 *A review of international and national developments in the use of qualifications frameworks* Paper prepared for the European Training Foundation

³ OECD 2007 op cit p179

⁴ European Commission 2008 *Explaining the European Qualifications framework* p4

⁵ Sellin, B 2007 ‘The proposal for a European Qualifications Framework. Making it a reality – possibilities and limitation’ *European journal of vocational training* (42/43) p7

Many European countries have developed national qualifications frameworks with only a few countries not involved at some level of progress or completion. The European Commission is requiring countries to match their qualifications levels to the EQF by 2010 and for it to be included on certificates by 2013. An excellent overview of developments in Europe is included in a recent article by Jens Bjornavold and Mike Coles.⁶

2. Other regions

As Tuck⁷ reports, there is extensive introduction of national qualifications frameworks across the world, with as many either under development or being considered. Regional Qualifications frameworks are under development in the Caribbean, Pacific islands and the Southern African Development Community (SADC).

⁶ Jens Bjornavold and Mike Coles 'Governing education and training; the case of qualifications frameworks' *European journal of vocational training* (42/43, 2008 p203-235)

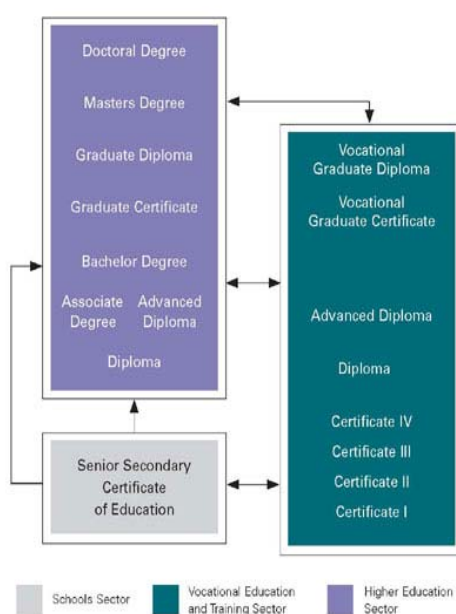
⁷ Tuck, Ron 2007 *An introductory guide to national qualifications frameworks: conceptual and practical issues for policy makers* Geneva, ILO p.1.

A key question that is being asked is will the EQF be established as an international benchmark system for qualifications?

3. Asia-Pacific region

In our region there has been considerable development with national qualifications frameworks in place in Malaysia, Philippines, Sri Lanka, Singapore, Hong Kong, New Zealand, Vanuatu and Australia. Countries developing frameworks include Fiji, Samoa, Thailand and South Korea.

CROSS-SECTORAL QUALIFICATION LINKAGES



What is the Value of a Qualifications Framework?

The OECD identifies frameworks as one of the 20 mechanisms to ‘trigger more and better lifelong learning’ along with providing credit transfer, recognising non-formal and informal learning and creating new routes to qualifications. This is supported by Tuck who identifies their value as placed ‘in its potential to contribute to policy goals such as:

- Lifelong learning
- Recognition of skills
- Improving the quality of education and training⁸

The Australian Qualifications Framework

Developed in 1995, the Australian Qualifications Framework (AQF) is a cross-sectoral framework that aims to:

- Contribute to a coherent, transparent, nationally consistent and more integrated qualifications system.
- Increase and target access to qualifications.
- Open up progression routes and flexible pathways.
- Introduce flexibility for learners, providers and users

- Promote recognition and validation of all qualifications (including non-formal/informal learning).
- Promote vocational education and training and adult learning.
- Make qualifications more relevant to societal and labour market needs, contributing to national economic performance.
- Promote investment and participation in skill development in the workplace.
- Promote national and international recognition of qualifications offered in Australia.

What mechanisms are used to achieve these goals?

The AQF is a comprehensive and nationally consistent framework across the three education sectors. It illustrates qualifications pathways with descriptors and guidelines for each qualification. In addition, the framework provides guidelines for cross-sectoral linkages and recognition of prior learning and principles for issuing qualifications and protection of titles.

⁸ *ibid* pv

Pathways in the AQF

Unlike many countries, the AQF does not combine accreditation or recognition functions with the framework. In Australia, these functions rest with the State and Territory accreditation agencies (generally government departments) for the school and vocational education and training sectors and the non self-accrediting higher education institutions. Universities are generally self-accrediting.

A new Council provides the mechanism for monitoring the implementation and relevance of the framework and is charged by the Commonwealth government with strategically strengthening the AQF to ensure it continues to meet the needs of users and stakeholders, remains robust, nationally consistent and internationally competitive. Council's role is one of 'guardianship' of Australian qualifications and policy and is one of the few bodies in Australia that crosses all educational boundaries.

The AQF in the future

A key challenge for the AQF is that although aims are comparable with international development, using a qualifications framework to promote recognition and

validation of all qualifications including non-formal and informal learning does appear to be a challenge for many countries, including Australia.

Additional challenges that will impact on the future direction of the AQF include:

- Increasing globalisation with mobility of students and skilled workers across border means that Australian qualifications must remain internationally recognised and readily portable including the ability to compare qualifications with international frameworks.
- Emerging skills shortages means that the AQF must maintain contemporary relevance and facilitate recognition of knowledge and skills so that workers can upgrade qualifications easily.
- The continuance of mandating high standards and highly visible quality assurance.

The AQF website provides information on the AQF policies and guidelines. The *AQF Implementation Handbook* can also be downloaded from the website: www.aqf.edu.au

THE CHANGING STATUS OF TVET – Dr Margarita

Pavlova, Griffith University

Historically such thinkers as Dewey (1966) warn about the danger of interpreting vocational education as a means of securing technical efficiency in specialised future pursuits. He argued that vocational education should be used for the development of mind and character, otherwise VET would “become an instrument of perpetuating unchanged, the existing industrial order of society, *instead of operating as a means of its transformation*”. However, despite warnings like this, VET became a means for skills training in a majority of countries around the world. Training packages in Australia are an example of competency training without the development of appropriate values and attitudes.

Current research also argues for a broad perspective on the role of TVET that is not limited to training for specific occupations, but *capacity building and empowerment of individuals* is seen as an important mission of TVET. Empowerment is the process of “gaining power and control over decisions and resources that determine the quality of one’s life” (The World Bank, 2002, p 10), and education could play an

important role in the process by raising individuals’ levels of consciousness, so they are able ‘to translate their assets into choices’. This process is closely related to the development of particular attitudes and values.

Therefore, this presentation argues for the need to change the status of TVET and this change could occur only if attitudes and values development became an important component of TVET and that SD could provide a framework for their development. The discussion is based on the results of the virtual conference on *TVET for Sustainable Future* (October 24 – November 10, 2007). This conference, organised by the UNESCO-UNEVOC International Centre in Bonn, attracted 106 participants from 49 countries from all UNESCO regions. The two issues considered are:

- Status of TVET;
- ‘Content change’ of TVET (new frameworks, development of attitudes and values relevant to SD; introduction of SD concepts, strategies, problem-solving, etc).

Status of TVET

The need to change the status of TVET was highlighted by

participants of the virtual conference. Almost in all countries, TVET is the second or third or the last option for youth. Anita Sharma from India stated:

“In India too, vocational training has been looked down upon as the options for those who are not able to take up higher education. White colour jobs are the most sought after - blue colour are for people with no other options. The dignity of labour is quite 'missing'. In the second one come issues which were also raised by one of the participants - capacity building of trainers/ management; financing of TVET; attracting more trainees; improving its status in society.”

Some participants focused on the role of the TVET professionals in taking an active role in making TVET popular and interesting. Several means for improving the status of TVET were proposed by the participants. They include:

- *New occupations in TVET:* “Some new occupations related to ICT and electronics are giving new message to the world in relation to TVET sector as a whole” *Dhruba Dhungel, Nepal.*

- *Facilities and finance:* “To respond to your question, school, colleges, universities should create parallel income generating activities to sustain the equipment acquired through different ways including the support from donors and government” - Cleophas Kanamugire, Rwanda.
- *Bridge general education & TVET- vocationalisation of curriculum:* “I really liked your bridge between general education & TVET - would like it more if we could extend it ... to cover the ages right from 6 yrs onwards - which means that the attitude and knowledge and awareness on skills should be initiated from day 1 of the child's learning. This might be one of the solutions to the world-wide problem of TVET being looked down - only for those who drop out from school or are not able to cope with GE” - Yonton B. Kesselly, Liberia.
- Another way of vocationalisation of secondary schooling is *introduction of technology education in secondary schools:* “As we discuss these issues, let us also think of the current trend of shifting

from Technical and Vocational education to "Technology education", not just in the name, but by context and content. Making TVET all-inclusive through introducing critical thinking, creative, and problem-solving skills I think will make it more sustainable to stand the emerging challenges of the day technologically" - Simon M.Yalams, Trinidad and Tobago.

- *Pathways – Higher Education and TVET*: "Too often, and this is a challenge we are facing in South Africa, a TVET qualification does not provide entry into a university course, except under exceptional circumstances, further perpetuating the split between "training" and "education". To my mind, this is counter-productive: who is to say that a person with a trade qualification does not have academic potential or interest?" - Fiona, South Africa.
- *Improve qualifications of TVET teachers*: "The notion of academic-vocational were put in opposition by some participants in terms of TVET teacher training. "If we limit TVET to providing

or training for particular skills and not expect the trainers to have "academic qualifications", then we are facing an uphill battle. I am not saying that ALL trainers SHOULD have the highest academic qualifications. I have had many discussions on "education" versus "training" and at times there seems to be a mindset that sees education as "opposed" to training. This is an inappropriate, not to say wrong, mindset, according to me" - Teeluck Bhuwane, Senegal.

- *Advertise TVET programs*: "I feel that we have done very little in the advertising of the programs in technical/vocational institutions and this has led to the young students hating the trades. Let us come up with advertisements which are aimed at safe ways of doing work, Let us take this down to primary schools and show the young ones different ways of getting sustainable employment, show them video films, projectors etc, Let the industries have an employee to lecture at an Institute at least for 2 hours in a week so as the students and the Instructors can pick on the

new skills and technologies”
- Stephen Lwalanda,
Uganda.

These suggestions provide initial points for developing of a comprehensive action plan on changing TVET status.

‘Content’ Change of TVET: A Holistic Paradigm

One of the major concerns that participants expressed was related to the need to change the perception of TVET as training in technical skills only. The role of TVET in the development of the ‘whole person’: *skills, values and attitudes relevant to SD to be developed through TVET studies* were highlighted by participants. Changes in our mindset, students’ development in an holistic way through TVET paying as much attention to values and attitudes as to developing skills are required: “More emphasis should be given to *developing attitudes and knowledge skills rather than technical skills*; - this can be the first priority in TVET” Anita (India). The participants argue for the paradigm change that brings TVET closer to general education, where education includes broader aspects such as values and attitudes.

“I believe TVET has a lot to offer in preparing the 'whole person'. Human dignity and

dignity of labour - health and harmony with nature - truth and wisdom - love and compassion - creativity - peace and justice - sustainable development - national unity and global solidarity - global spirituality. These are eight core values that are crucial for the development of the whole person. Integrated into TVET, these values can prepare workers and citizens with the knowledge, values, attitudes, behaviours and skills they need to be able to participate fully in their economy and work effectively and responsibly in a globalised world” - Josefa Natau, Fiji.

Cultural Learning

A number of participants propose that appropriate cultural learning should be included in TVET content. “We need to deeply research and consider any available wise "cultural" habit/regulation etc which used to exist in the relevant society. It’s like Bottom Up ways in developing strategic "SusDev". Currently most of the way was Top down.... Developing countries learn from developed country, or given from donor country to the recipients countries. Sometimes without we realized, we influenced others to used and implement our

parameter which we think 'good' or 'best'" - Carolina Lasambouw, Indonesia.

Ethics Module - Values

A real need to address values was argued by participants: "As an NGO working in Nigeria, I can remember when after three years of developing and implementing projects to help alleviate poverty and improve people's academic /vocational education, it suddenly dawned on us one day that a lot of the dictators and corrupt practitioners in Nigeria, as in most other countries, did not have the word "dictators" or "corrupt practitioners" written on their faces when they were young or, for some of them, when they started out very poor. But that after they became empowered (one way or the other) and grew out of poverty, became adults, got into positions of power, they had no clue how to handle the temptations of life and they end up destroying their societies, their people and themselves" *Idem Udoekong, UK.*

A number of TVET institutions in China and the majority of TVET schools in Russia include values education in their programs. For example in Russia the content of TVET consists of general subjects (e.g., ethics, literature, history, foreign language, biology) and

specialised subjects relevant to future occupations. Therefore, there are opportunities to address values in both components. Traditionally, workshop teachers have been involved in the process of students' up-bringing (values development). Over the last half century patriotism related to victory in the Second World War was the basis for value development. Now when the modern world has changed these teachers are searching for a new vision that could serve as the basis for value development (stated by Natasha). Natasha (not her real name) is the deputy-director of the Methodological Centre for VET in St. Petersburg that develops teaching materials and resources for all VET institutions in the city, as well as delivering in-service training for VET workshop teachers.

Natasha stated:

"When you are talking to workshop teachers you realise that they have a deficit in new orientation. Too much [of value education] is build upon our victory in the Second World War (that relates to the age of teachers) which symbolise a fight between world evil and a victory over it. With the current generation it does not work so well as with the previous ones. Therefore

different contexts provide different opportunities for change and require different degree of change.”

Conclusion

Re-orientation of TVET towards development of the whole person that includes cultural learning and broad knowledge brings it closer to the broader educational agenda. For both developed and developing countries the importance of developing new frameworks, attitudes and values relevant to SD and the introduction of SD concepts and strategies are important. Two ways in which TVET could change to empower individuals are identified:

- Management;
- Use a number of strategies to change the low status of TVET;
- Develop strategies that will

break down many of the barriers that learners face, (e.g. pathways, status of the graduates);

- Pedagogy;
- Use capacity-building approaches rather than skills training;
- Change the teaching paradigm: increase the integration of learning and values/ attitudes development;
- Use new pedagogical approaches to learning and teaching;
- Meet the changing nature and needs of the workforce (e.g. problem-solving skills).

The role of TVET teachers is crucial in achieving change, as TVET teachers need to ‘re-orient’ themselves to what is the new role and status of TVET.



ROUNDTABLE DISCUSSIONS BASED UPON PANEL THEMES

TVET AND SUSTAINABLE DEVELOPMENT

Vision: That there is no need to have distinct sustainability officers, programs or even policies because sustainability is embedded in the way we think, act and feel.

Questions:

1. *What is happening in your organisation/ country/ state?*

- Momentum for change is evident:
 - Policies are being developed;
 - Specialised courses are emerging (e.g. Carbon Accounting Management, however, most demand is currently from Environmental Consultants rather than business);
 - Graduate attributes include sustainability related competencies;
 - However, it is surprisingly difficult to get sustainability principles entrenched in all areas and down to each level (governance, operation, curriculum).
- Tension between competition / ownership on the one hand and principles

of ESD (collaboration, partnerships, sharing and open access...) on the other;

- VET training bound by competencies and training issues (also: 'hammering and gluing' approach rather than 'screwing and bolting' – i.e. throw-away as opposed to recycling and repairing);
 - Often, educational leaders are more concerned with course requirements rather than societal needs. Senior managers are more micro-managers and there is a lack of real engagement with sustainability issues.
2. *What should be happening?*
- Prepare resilience for the future: - More than being incremental -0 being open to a different ideas of what the role of TVET and HigherEd should be – due to changing conditions (climate change, resources availability);
 - Take educational and training institutions beyond what they are accustomed to - being prepared to take risks;
 - The long view – at least 100 years ahead.

- Incorporation of social, historical context – including values and ethics;
 - Legislation and education need to come together;
 - Evidence based decisions.
3. *What strategies are needed to make this happen?*
- Resources for TVET institutions to:
 - Network;
 - Think about new areas;
 - Strategic development and leadership for future focus
 - Work collaboratively to not reinvent the wheel – make time!!
 - Liaison with Industry Training Groups / Skills Councils (rather than with the AQFs?) to embed sustainability into the accreditation systems;
 - Build resilience into the courses: generalisation rather than specialisation;
 - Professional development /learning – capacity building;
 - Raise the status of sustainability occupations (e.g. most often lower remuneration);
 - Recognition of the existence of a genuine set of skills and a very particular knowledge set;
4. *What are the priorities?*
- Strengthening of interdisciplinary work;
 - Interconnected planning/ operations/ curriculum.
 - Equal level of importance to all.

TVET AND TECHNACY FOR INDIGENOUS COMMUNITIES

TVET Standards limit capacity for technacy. It encourages technical competence, not necessarily technacy. VET is currently aimed at employment rather than holistic livelihoods. VET has removed the ‘craft’ focus from training, making it one dimensional.

Industry and companies want staff who can problem solve (so they are looking for technacy). In New Zealand, TVET and Indigenous Māori education recognise the value of intuitive knowledge/craft.

TVET should develop capabilities to encourage technacy for livelihoods

Flexibility should be written into standards to allow for context (a holistic approach and intuitive approaches), which link to outcomes focus.

There should be a change in assessment to allow for contextualising of knowledge and the application of principles.

How will this curriculum, (with principles) as well as assessment, be written? There should be principles for training rather than prescriptive vocational knowledge.

From K-9 at all levels, there should be education on being technate. There should be education that supports understanding the consequences of choices and not just the normative adoption of new technologies.

Regain an understanding of craft and putting this back into TVET.

1. Move language to where TVET permits, principles-based assessment, including new and indigenous knowledge (to be less prescriptive of detail and more weighting given to actions and outcomes based on principles).
2. Move language to the contextual, technate from the current technology- focus.

Need to build shared understanding around these terms. Staff development is important.

GLOBALISATION, LABOUR-MARKET MOBILITY AND QUALIFICATIONS SYSTEMS

- Increasingly we need to be looking through an ‘international lens’ when developing new training arrangements – especially in the training package context. Can’t just deal with parochial issues any longer.
- At a macro level, mobility is happening at a faster pace than our ability to develop appropriate workforce development strategies. Possibly a need for a more global approach to facilitating successful, mobility – regional workforce strategies similar to regional qualification systems.
- In this vein; how do we control for migrating flows to ensure skills are not depleted from donor countries net providers of labour to other countries?
- In terms of qualification systems – where countries successfully incorporate sustainability and values into their formal systems – what does this mean for countries focussing only on technical competence? Will they become increasingly irrelevant?

- Emerging issues for countries like Australia – our current insistence on migrants having appropriate qualifications/ credentials to work when this is not always an expectation of Australians. Trade diplomacy issue?
- Competition versus collaboration at which point does international education negatively impact on the competitive edge of a country.
- Need to incorporate better informal learning into the formal learning process. In the Australian context; this needs to start with training packages.
- Set up a RPL regime where the process occurs more out in the industry rather than just within the educational institution context. Work out assessment practices etc. at the shop-face.
- In terms of implementing training regimes – be aware that certain concepts and methodologies (such as flexible learning approaches) are not recognised or valued in some countries.

CHANGING STATUS OF TVET

During the discussion, the changing status of TVET was perceived to be closely related to the need to shift our societies to

the path of sustainable development; to inclusion of education for sustainability in TVET curriculum and the daily functioning of TVET institutions. From a broader perspective the view emerged that there is an urgent need to change the material wealth paradigm that dominates in westernised societies to the sustainability-values based paradigm that re-defines quality of life in terms of non-material values.

Another radical measure proposed was the need to change the name of vocational training to something that represent the broader nature of education for employability: lifelong learning? Skills for employability? Post-compulsory education?

The following is a summary of issues discussed at the table:

- Central support from the government is required, in terms of prioritising TVET and funding it;
- There is a need for additional self-funding by TVET institutions as this could help to broaden students' learning programs;
- Promote TVET as an inclusive, holistic, high-quality option for youth that is focused on applied learning

- and provides global employability;
- TVET staff should appear in the media to promote successes in TVET studies;
 - The need for ethics courses in TVET programs was highlighted;
 - For TVET advertising, use examples of successful links between TVET institutions and well-known enterprises; establish training centres at the enterprises;
 - Establish and promote associate degrees: Master and Professional doctorate that would include applied learning through TVET programs into degrees (more and more often university graduates enrol in TVET programs);
 - Articulation of TVET studies into higher education degrees;
 - Existing training packages should be re-developed as they represent a very narrow vision of TVET. This process should be based on broad consultations, so ESD initiatives in TVET will be assessed and included as appropriate in the core studies;
 - Sustainability in TVET should be promoted as a new literacy and numeracy, - a core requirement;
 - SD issues should be included as a separate subject/competences and added into existing subjects/competences (for example, occupational health and safety component could easily include sustainability issues);
 - Students should apply sustainability principles to their practicums;
 - TVET staff should have an opportunity and be encouraged to enrol in professional development programs associated with the paradigm change of TVET;
 - The results of the separate ESD projects should be put together on the UNEVOC International Centre in Bonn website to share with interested parties;
 - Work with parents: promote a 'new' nature of TVET studies;
 - Increase competitiveness at the stage of enrolment.

To change the status of TVET in different countries requires different strategies appropriate for the contexts. The examples of Australia, China and Russia were discussed.

MODERATOR'S SUMMATION

The first thing a Moderator needs to do is thank all those who have gone before. Without the panel speakers there would have been no presentations and, without their presentations, there would be very little indeed for a Moderator to summarise. It is also important to thank everyone who has contributed to plenary discussions and round-table deliberations. Without your contributions and interactions with each other, there would be no debates to moderate. So, thank you one and all.

This symposium was convened by the UNESCO-UNEVOC International Centre for three reasons:-

First, it was an opportunity for UNESCO-UNEVOC Centres in Australia and New Zealand to meet and share their experiences with each other and other UNEVOC Centres in the region;

Second, a number of TVET systems and institutions were invited in order to learn about the UNEVOC Network and about ways in which they might become involved and perhaps become a UNEVOC Centre;

Third, we explored five significant trends that are of interest and concern for TVET around the world. These are the areas that member of the UNEVOC Network are wondering “So What?” and “How do we respond?” and “What are we going to do about this?”

- Sustainability
- Technacy
- Cultural contests and drivers
- Respect for Indigenous knowledge and technological ways of knowing
- Globalisation
- Ageing workforce
- Skills shortage
- Worker mobility
- International recognition of qualifications
- Qualification frameworks
- Changing Status of TVET.

We had the opportunity to listen to some very good thinkers and speakers on these issues. This is one of the advantages of being a part of the UNEVOC Network.

As well as being able to participate in meetings like this one, members of the UNEVOC Network can participate in a wide range of networking and capacity building activities, including: accessing international best

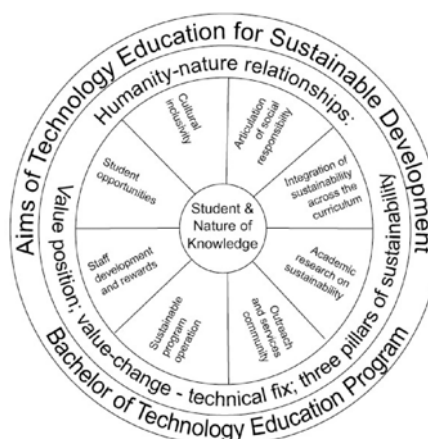
thinking and practice in TVET via the UNEVOC Bulletin, bibliographies, discussions, research reports and books. We can participate in virtual conferences via the UNEVOC website.

More significantly, perhaps, being a member of the UNEVOC Network means that we can write articles for the UNEVOC Bulletin, discussion papers, research reports and books. We can use the Network to share news about our innovative work. We can develop partnerships – commercial ones – with UNEVOC Centres in other countries – such as the PINZ–Saudi partnership on research and development like the Griffith – China one. We can also offer to host virtual conferences (like the Griffith Centre has done) and organize national, sub-regional and regional workshops like this one or the one in Vietnam on teacher education and TVET in 2009.

Importantly, also, you can offer your staff as members of official UNEVOC technical assistance teams e.g. like when Rupert asked RMIT UNEVOC Centre to provide someone to facilitate a workshop on water technician training in Vietnam early this year. We paid the airfare and UNEVOC the hotel bills, or

unofficially, like when Ganesh asked us yesterday for someone to help write a core course on ethics in the workplace. I am sure that Fiji Institute of Technology would provide living expenses if one of our Institutes provided the time and airfare for a staff member. Then again, maybe one of our Institutes might like to join with Ganesh to make a joint applicator for a UNEVOC small grant.

So where to we go from here? We will have a three stage reporting process. First, we have a CD of all the presentations. Second, we will send a copy of the book “Work, Learning and Sustainability”. Third, we will be producing a report – two pages from each speaker and 2-3 pages from each roundtable. We will send everyone a copy, but more importantly, the report will go on the UNEVOC website.



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