



Technical and Vocational Education and Training for Sustainable Development

An Annotated Bibliography of Research
and Related Literature (1998 - 2004)

UNEVOC

Annotated Bibliography: №1

**TECHNICAL AND VOCATIONAL EDUCATION AND
TRAINING FOR SUSTAINABLE DEVELOPMENT**

An Annotated Bibliography of Research and Related Literature
(1998 - 2004)

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UNESCO-UNEVOC International Centre Publications

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List of Annotated Bibliographies published to date:

1. Technical and Vocational Education and Training (TVET) for Sustainable Development
2. Women and Technical and Vocational Education and Training (TVET)
3. Youth Unemployment – Meeting the Needs of Youth
4. Exploitative Work – Child Labour
5. Occupational Health and Safety

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www.unevoc.unesco.org/publications

FOREWORD

One of the main functions of the UNESCO-UNEVOC International Centre is knowledge management and information sharing. Particular attention is given to promoting best practices and innovations in technical and vocational education and training (TVET) and education for the world of work, with special reference to meeting the needs of developing countries, countries in transition and countries in a post-conflict situation. The Centre also seeks to help bridge the gap that often exists between research, policy and practice in the area of education for the world of work.

To bring this function to fruition, the UNESCO-UNEVOC International Centre is in the process of developing an extensive publications programme in the form of an *International Encyclopaedia of Technical and Vocational Education and Training* (TVET). The following volumes are currently under preparation:

- International Handbook on TVET
- Book Series ‘Current Developments in TVET: Issues, Concerns and Prospects’
- Handbook on TVET Research
- National Profiles of TVET Systems
- International Journal of TVET
- Annotated Bibliographies of TVET.

The Annotated Bibliographies of TVET are a series of reviews of literature related to key issues of TVET that has been published within the last six years. The review published in this volume is part of this series of annotated bibliographies being published by the UNESCO-UNEVOC International Centre.

The information was obtained through an extensive Internet search of online journals, conferences, databases and archives. However, it must be noted that some sources relevant to the topic may not be included due to a lack of access and subscription to various journals and databases. Therefore, these literature reviews are not proposed to be an exhaustive collection of such works, but are meant to serve as a representative sample of the type of research taking place in the field of TVET, to aid others in their research.

These annotated bibliographies are part of an ongoing project in which the topics will be revisited from time to time to include newly published work; and additional topics will be added to the series over time.

It should be noted that descriptions of the publications featured are often quoted directly from the article’s abstract or associated website, and so are not the original work of those who have compiled these bibliographies.

For more information about the *UNESCO-UNEVOC International Encyclopaedia of TVET* contact: publications@unevoc.unesco.org

Rupert Maclean
Director

CASE STUDIES AND BEST PRACTICE

Adult environmental education: Awareness and environmental action*

UNESCO (1997)

*For full description, please see *Lifelong Learning*

Bayer CropScience: Integrated crop management capacity building projects

International Cleaner Production Cooperative (2000) [online]

Geneva: World Business Council for Sustainable Development

<http://es.epa.gov/cooperative/international/>

Description from website:

Bayer has designed an Integrated Crop Management (ICM) training program for farming families in Latin America. A pilot project began in May 1995 in Brazil, and a replication of the program was launched in Guatemala in June 2001, as a public/private partnership with German service company Gesellschaft für Technische Zusammenarbeit (GTZ).

The overall campaign was based on the basic concepts of ICM. Special attention was given to Integrated Pest Management (IPM), which includes indirect measures of weed, pest, and disease prevention such as crop rotation and monitoring pest populations against threshold levels. Direct control of pests, through biological, biotechnological, mechanical, and chemical measures, and the correct and efficient handling of chemical crop protection products were all important aspects of the project.

In Brazil, 25,000 small-scale farming families were reached, including 1,300 teachers and 2,500 children. Positive results were recognized in relation to crop rotation and conservation tillage, the value of beneficial organisms, the effective use of crop protection products and the value of protective clothing. In Guatemala, about 3,000 people have attended the training sessions in the first 6-months and 40 external trainers attended the training sessions. New cultivation techniques have improved practices, as demonstrated by an increase in peanut production yields from 975 kg/ha to more than 3,500 kg/ha; net earnings increased from US\$ 738/ha to US\$ 1061/ha. In addition, the effectiveness of the program in Guatemala is helping to reduce the migration of farmers with previously marginal yields to the tropical rainforest areas in search of “new lands” for agricultural purposes.

Business and entrepreneurship education for the 21st century*

Cloud, Jaimie; Martin-Kniep, Giselle (eds.)

New York: Department of Education, Office of Brooklyn High Schools, 2004

Excerpt from introduction:

The material is a one-year project-based course of study on Business and Entrepreneurship Education for the 21st Century (BEE 21) for secondary school students. In Brooklyn, NY, this course will be taught as the second year of a three-year business and entrepreneurship sequence. The first year involves the study of Microsoft Office software and the third year involves a practicum in the Virtual Enterprise Program (VE). The course aims to develop effective entrepreneurs who will use their new insights, knowledge and skills to develop ventures that are in harmony with prosperity and the long-term health of their society and the planet. Students will grow in self-knowledge as they explore their values, interests, skills and needs. They will learn about the economy, their society and the ecosystem so that they can develop successful entrepreneurial ventures. Students will be exposed to the real-world context in which their business will exist. They will develop the concrete skills they will need to plan and operate an entrepreneurial venture successfully. Ultimately, students will develop their understanding of entrepreneurship in a context that leaves them hopeful about making positive contributions to their world, and prepared and motivated to make such a contribution.

Sustainability Framework

The primary contextual framework in this course is the Triple Bottom Line. The Triple Bottom Line measures the performance of organizations, especially business organizations on three broad sets of criteria:

- Economic and Financial Performance
- Social Contributions
- Environmental Impacts

This course will give students the background knowledge to understand not only how their businesses perform, but also how they play a role in shaping, and are shaped by, society and the environment. It will challenge students to think about how we can measure these outcomes, and how we make trade-offs among and between them.

*Also found under *Employment in the Sustainable Development Context*

Caterpillar: Supporting sustainable forestry management in Brazil

International Cleaner Production Cooperative (2002) [online]
Geneva: World Business Council for Sustainable Development
<http://es.epa.gov/cooperative/international/>

Description from website:

Caterpillar and the Tropical Forest Foundation (TFF) are promoting the transfer of sustainable forestry techniques to Brazil through education, training and partnerships formed with local and international groups.

The objective under this partnership was to show how the use of low impact work techniques and the appropriate technology can reduce damage and increase harvesting efficiency in tropical forests. It was also to co-operate in establishing sustainable exploration policies that guarantee the survival of economic activity while conserving tropical forests.

TFF has become widely recognized for establishing demonstration models and training schools to show the advantages and teach the principles of sustainable forest management/Reduced-Impact Logging (RIL). In 2001, more than 450 participants completed training on how to apply RIL practices to logging operations. Since 1996, more than 1,000 people from logging companies, universities, and governmental agencies have been trained in Brazil in reduced-impact logging practices. FFT instructors also provide extension training by visiting forest communities, university and technical forestry schools, and forest industrial companies.

CH2M HILL: landfill energy recovery projects

International Cleaner Production Cooperative (2002) [online]
Geneva: World Business Council for Sustainable Development
<http://es.epa.gov/cooperative/international/>

Description from website:

In November 1997, engineering and construction firm CH2M HILL was hired to assist the State Environmental Protection Agency (SEPA) of the Peoples' Republic of China, to advise on technical and economic feasibility and construction requirements for energy recovery facilities at municipal solid waste landfills. The project was intended to provide incentives for eliminating greenhouse gas emissions of methane from landfills, as China develops modern solid waste disposal methods.

The project was conceived as a way to promote better waste management practices, because efficient recovery of the methane requires proper landfill containment and rewards it with the economic benefits from using or selling the recovered methane as fuel.

The objectives of the project were to: establish demonstration plants to capture methane from landfills and use it as fuel or to generate electricity; create a training facility for landfill operators, energy service companies, municipalities, and other businesses on building and operating landfill energy plants; set up institutional arrangements to operate landfill gas recovery technology and produce and sell gas and electricity at each site; demonstrate approaches to establish the price of electricity generated and lower the cost of future plants to make landfill-gas electricity financially viable; and prepare an action plan to promote the widespread replication and adoption of landfill gas recovery technology in China

Capacity building, for both technical and institutional requirements, was a major component of the project. Both technical hardware and an extensive training program were provided to the technical personnel in each city who would be responsible for implementing the energy recovery projects.

Compendium of sustainable development indicator initiatives

International Institute for Sustainable Development (2004) [online]
Winnipeg: International Institute for Sustainable Development
http://www.iisd.org/pdf/2004/measure_compendium_brochure.pdf (brochure)

<http://www.iisd.org/measure/compendium/> (link to compendium)

Description from website:

In 2002, the International Institute for Sustainable Development (IISD), Environment Canada and the International Sustainability Indicators Network (ISIN) launched an exciting redevelopment of the Compendium.

The current version, which houses information about 600 initiatives, shows in-depth information on each initiative including: the type of initiative; the nature of public involvement; geographic scope; complete contact information; and project goals. A powerful search tool allows users to find initiatives easily.

While IISD manages the Compendium, project leaders are invited to submit and manage their own entries. This results in currency, a sense of community and a solid, user-focused product.

This brochure invites people to visit IISD's online global directory of sustainability indicator initiatives. At the time of publishing (March 2004), about 600 initiatives were described in the compendium. The compendium was relaunched in 2002 by IISD, Environment Canada and the International Sustainability Indicators Network.

EcoCampus

EcoCampus (2004) [online]

Paris: EcoCampus

<http://www.lsd.org.uk/research/sustainability/goodpractice.pdf> (English description p. 6)

http://www.ecocampus.net/ecocampus/default_flash.html (EcoCampus site - in French)

Excerpt from 'method' section of LSDA paper:

EcoCampus is an environmental management system and award scheme for the further and higher education sectors. The scheme allows colleges and universities to be recognised for addressing key issues of environmental sustainability. It is open to all institutions committed to a programme of continuous improvement in their

environmental sustainability performance. Benefits of EcoCampus include:

- identifying financial savings through, for example, improved resource productivity and a reduction in energy consumption and landfill costs
- helping to establish compliance with environmental legislation, and thus reducing the risk of incurring penalties for unlawful activity
- enhancing student recruitment potential by providing evidence of responsible practice
- improving external perceptions of the institution
- enhancing research and consultancy opportunities
- actively involving staff and students in the institution's activities, helping to create a sense of community and ownership.

EcoCampus is designed to be flexible, allowing a step-by-step approach to its implementation, with institutions encouraged to consider eight key environmental sustainability issues:

- built environment
- community involvement
- resource use (including energy and water)
- curriculum 'greening'
- waste
- health welfare & safety
- transport
- ethical/sustainable procurement.

EcoCampus is based on a series of key steps towards establishing an ISO 14001-compatible environmental management system within the institution. Institutions need only progress as far as they like through the key steps and do not need to address all eight environmental sustainability issues at once. Certificates of achievement are awarded to institutions by an independent certification body at all key stages throughout the EcoCampus project and progress awards are made by Going for Green to help publicise performance and motivate further action.

The Envirocare CD-ROM – Cleaner production training for vocational students

Coakley, Tadhg

In: Journal of Cleaner Production, Vol. 11, No. 5, August 2003, p. 511-517

Elsevier Publications, 2003
ISSN 0959-6526
Languages: English, Dutch, German, Portuguese
<http://www.sciencedirect.com/science/journal/09596526>

Description from website:

Environmental awareness raising, education and training, on a wide scale, are required to ensure societal adoption of sustainable development. ENVIROCARE, an interactive multimedia educational CD-ROM, has been developed by a transnational partnership to provide such environmental education for vocational students. The programme, available in English, Dutch, German and Portuguese, is designed to provide training for students to show the impact that industry can have on the environment and how they can reduce such impacts when they enter the workforce, by implementing the concepts and approaches of Cleaner Production. The paper describes the development of ENVIROCARE, its contents and structure, the lessons learned in its creation and future challenges.

Environmental education: Working knowledge and skills for sustainable development

Schreiner Alves, Julia

In: Richard Gerster (ed.), *Linking work, skills and knowledge: learning for survival and growth international conference*, Swiss Agency for Development and Cooperation International Conference, Interlaken, Switzerland, 10-12 September 2001

Berne: Swiss Agency for Development and Cooperation, 2001

<http://www.workandskills.ch/downloads/ConferenceReportWS.pdf>

Description from VOCED website:

This paper reviews ways in which environmental education can be incorporated into both formal and informal educational and training systems in Brazil in order to improve economic and environmental development and sustainability.

Greening the Curriculum

Woods, Joy (2004) [online]

London: Learning and Skills Development Agency

<http://www.lsd.org.uk/sustainable/toolkit/Projects/01.asp>

Description from website:

Aims

To increase sustainable development awareness amongst learners and staff, whilst disseminating good practice to other educational establishments and partners.

Objectives

To identify sustainable development best practice within curriculum; to identify curriculum areas which have scope for sustainable development inclusion; to identify sustainable development champions within each curriculum area; to develop and deliver sustainable development education, within selected areas.

Audience

Curriculum Managers; FE Lecturers; School Teachers; Senior Managers in business and education; Local Authority officers; Environmental/Estates Managers.

Activity

The Project activities included: Carrying out a full sustainable development curriculum review; reviewing different methods used for introduction of sustainable development elements into curriculum; identifying curriculum SD champions during curriculum review – the College has already appointed a full time SD champion; developing & promoting sustainable development through key skills materials; continuing & promoting environmental awareness visits as an enrichment option; developing & promoting tutorial sessions & off the shelf packs for tutors – focusing on sustainable development, purchasing, waste, energy & travel; developing online interactive sustainable development promotional materials for staff/student induction & the staff/student intranet; disseminating Council for Environmental Education (CEE) materials & Local Agenda 21 (LA21) support for pre 5s to College Crèche & Nursery, as well as EYDCP (Early Years Development Child Care Partnership); providing & promoting College wide events to staff & students; delivering presentations to all partners at bi-monthly partner dissemination events; raising awareness among local partners to the benefits of a local strategy for SDE; developing a mailbase of partners for use as a tool for the dissemination of materials & updates relating to the project.

Grupo Nueva: terranova development and training center

International Cleaner Production Cooperative (2002) [online]
Geneva: World Business Council for Sustainable Development
<http://es.epa.gov/cooperative/international/>

Description from website:

Terranova, a GrupoNueva company, has created a "Development and Training Center", called San Isidro, to offer training in various trades to adults in the community of Cabrero, in the south of Chile. Cabrero is a 15,000 people town, with some 15,000 people more living in the rural areas around town. This is a low-income community, with many adults who could not finish their studies and have great need of training in order to find a job or improve their earnings. Trades were selected according to community needs, and the Center keeps a close relation to the municipality to make sure that training is oriented towards serving the needs of the future investments in the area.

San Isidro offers courses for low-income adults, or adults with little schooling living in the neighboring community. Classes started last April 30th in 4 trades, and by the end of 2001 they had training for 8 trades. Each class has some 15 students, with an average basic schooling of 6 years. The training is complemented with courses in math, personal development, speech, sustainable development, safety, and environmental education, in order to help them upgrade their basic schooling. The courses are offered following an incremental modular system: every quarter students receive a certificate of attendance at the different levels, so if they find a job they can come back after a while and take the other modules.

50% of the attendees are women, and the schedule has been planned to allow for men and women to attend: mothers can take the course during daytime while children are at school, and all working people can attend courses at night.

Courses are practically free, and the center offers the infrastructure that was built for the center for the community to use when required: it has 4 workshop areas, a library, and a 50 people auditorium.

Horizonte 21

Bundesinstitut für Berufsbildung and SENAI (2004) [online]
[Published in German, Portuguese]
Bonn: Bundesinstitut für Berufsbildung
http://www.iub-hannover.de/HOR_06/HORIZONT.HTM

Description:

Joint project of BIBB and SENAI focusing on the Training of Trainers in the area of environmental aspects at the workplace.

Increasing vocational awareness through an 'Environmental Impacts of Business and Industry' module*

Horner, Jonathan (1998)

*For full description, please see *Environmental Sustainability*

KPMG UK: Environmental team challenges

International Cleaner Production Cooperative (2002) [online]
Geneva: World Business Council for Sustainable Development
<http://es.epa.gov/cooperative/international/>

Description from website:

UK offices of advisory services firm KPMG are undertaking a series of environmental initiatives to raise staff awareness and participation in environmental management efforts. These include engagement in conservation projects within the local community, supporting a local environment charity and hosting an environmental art exhibition.

The firm introduced an environmental policy on 1 October 2000, committing it to integrating environmental best practice into all business activities. The focus to date has been measuring the main impacts of the firm:

water, office waste, paper and energy consumption, and both air and car travel. To minimize these impacts on the environment, KPMG is making several structural and behavioral changes. In 2001, such measures generated savings of £250,000.

KPMG is a people centered business, and any management system needs to be people focused and capable of being implemented at a local level. To embed environmental management in every aspect of the firm's activities a two-pronged approach was required:

- Structural changes – working through the supply chain to ensure that the structures in place fully support the environmental aspirations of the firm.
- Staff awareness – providing education and training to ensure that all business activities are undertaken in an environmentally responsible manner.

KPMG UK has a central team who provide guidance across the firm. Supporting these endeavors, the real implementers of change belong to a network of environmental coordinators in each UK office. These volunteers act as a catalyst for change within their working environment. By training each environmental coordinator and providing tool kits to support their efforts, highly effective local change agents have been established. There is a broad range of programs, covering everything from paper reduction through to bicycle usage and environmental team challenges. These support and reinforce the structural changes taking place in the firm.

Staff awareness is key to everyone's participation in minimizing environmental impacts as a result of business activities. All permanent staff who join KPMG start their career with an induction course which includes environmental management. This key session underlines the firm's commitment to environmental management and outlines how staff may contribute to our environmental performance.

Learning to Last Toolkit*

Learning and Skills Development Agency (2004)

*For full description, please see *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

On the road again: Supporting VET development in a globalised context*

Volkoff, Veronica; Perry, Jane (2001)

*For full description, please see *Policy Debate*

Participatory environment education and training for sustainable agriculture: Best practices in institutional partnership, peer learning and networking

Wentling, Tim; Adhikarya, Ronny; Teoh, Chye-Hean (eds.)

Rome: Food and Agriculture Organization of the United Nations, 2001, 234 p.

<http://www.fao.org/sd/erp/Peetsain.PDF>

Excerpt from summary:

This book describes FAO's pioneering approach in integrating environment education concerns into agricultural education and training programmes. It reports the process, achievements and lessons learned from the actual experiences in planning and implementing such programmes in eight agricultural education, training and extension organizations in six countries. More importantly, the book provides insights on how participatory and collaborative activities in incorporating environment education through the agricultural extension, education and training programmes had been successfully undertaken by these eight institutions which in the process learned from, and helped, each other. The lead trainers from the organizations involved in this innovative programme shared their first-hand experiences by contributing useful information and analysis in their respective chapters of this book on Participatory environment education and training for sustainable agriculture. This book is a comprehensive process documentation of the carefully planned efforts to mainstream practical and relevant environment issues into agricultural extension and education programmes which need to provide more demand-driven and beneficial services to farmers. It also highlighted the best practices in institutional partnerships, peer learning and networking among the eight pioneering institutions in the six countries, which can be replicated, with appropriate adaptations, by similar institutions in other countries worldwide.

Professional education and training for sustainable development in SMEs*

Hilton, Mark; Smith, David (2001)

*For full description, please see *Workplace Learning*

School-based enterprises and environmental sustainability

Arenas, Alberto (2003)

*For full description, please see *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

Sustainable Development through Partnership

Sinnott, Gillian (2004) [online]

London: Learning and Skills Development Agency

<http://www.lsd.org.uk/sustainable/toolkit/Projects/11.asp>

Description from website:

Aims

The aim is to build upon developing good practice at Wigan & Leigh College to raise awareness of sustainable development.

Objectives

- Curriculum Greening: development of good practice at Wigan & Leigh College
- Community Projects: establishment of new links between College and Community Groups to promote Sustainable Development.
- Informing Local and Regional Strategies: through active participation in the Wigan Local Strategic Partnership and through the Greater Manchester LLSC network.
- Management: dissemination of good sustainable development practice through the development of networks and partnerships between Local Colleges and through courses and workshops for Council employees and other groups.

Audience

- Curriculum Managers/Lecturers/Tutors with responsibility for developing an enrichment curriculum
- Premises/Estates managers,
- LSC representatives with responsibility for promoting Sustainable development.

Activity

- Education for Sustainable Development course materials
- Guidance for Premises Managers in Waste minimisation and energy reduction in a Further Education College,
- Development of a network.

Sustainable procurement in the further education sector

Briggs, Mike; Condon, Patrick (2004) [online]

London: Learning and Skills Development Agency

<http://www.lsd.org.uk/sustainable/toolkit/Projects/03.asp>

Description from website:

Aims

To promote the need for training aimed at college, estate, project and purchasing managers within the Further Education sector. The overall theme of the project was to ensure the more prudent use of natural resources within FE, enabling colleges to understand and account for the environmental, social and ethical impacts of their purchases.

Objectives

Raise awareness and understanding of sustainable development and sustainable procurement within college management; provide expertise to the sector through recognised partners; develop training materials with the sector, for the sector; to promote resource efficiency, recycling and awareness of environmental law and management systems in the context of sustainable development; more specifically the project will develop a high quality training package for the Further Education sector that:

Raises awareness of sustainable development, demonstrating the central role of procurement (and resource management) when working towards:

An environmental management system (EMS); waste minimisation, energy efficiency and travel plans; best value techniques using whole life costing and life cycle analysis; pilots training to key personnel within a small number of FE colleges; engages 'Champions' of Sustainable Procurement to implement best practice.

Activity

There were seven major actions. These included:

An inception meeting to bring together the various partners; the design of the training programme of sustainable procurement; the development of materials by the Environment Agency, EAUC and the Chartered Institute of Purchasing and Supply; delivery of the Training programme to FE colleges; appraisal and review of programme with view to improving materials; publication and promotion of the programme via the internet; the delivery of two national training days.

Vocational education and training toward sustainable development: Successful practical examples from enterprises, vocational schools and training centres (Berufsbildung für eine nachhaltige Entwicklung: erfolgreiche Praxisbeispiele aus Betrieben, Berufsschulen und Bildungsstätten)

Mertineit, Klaus-Dieter; Exner, Verena

[Published in German]

Cologne: Deutscher Wirtschaftsdienst, 2003, 264 p.

ISBN 3 871 56540 7

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=49746469>

Description from website:

The author is concerned with promoting vocational education and training (VET) as a way of advancing sustainable development. In addition to presenting the state of the current discussion on sustainability, numerous examples of environmental education from enterprises and vocational schools are introduced. The contents include: environmental vocational education on the way toward vocational education and training for sustainable development; sustainable management of energy, sustainable trade, sustainable construction and living and sustainable communication structures; and practical examples of selected methods.

Workplace research and education for sustainable development

Gereluk, Winston; Royer, Lucien

In: Faculty of Continuing Education, University of Calgary, International Conference on Researching Work and Learning: 2nd, Canada, 2001

Calgary: University of Calgary 2001, p. 536-543

ISBN 0 889 53250 8

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=40436711>

Description from website:

Sustainable development is appearing with increasing frequency on the agendas of trade unions around the world in response to concerns over the deteriorating state of the environment. This paper uses case studies of workplace and community based learning to illustrate the nature of trade union sustainable development programs.

EDUCATION AND TRAINING

Lifelong Learning

Adult environmental education: Awareness and environmental action*

In: UNESCO Institute for Education, Fifth International Conference on Adult Education, Hamburg, Germany, 1997

Hamburg: UNESCO Institute for Education, 1999, 15 p.

<http://www.unesco.org/education/uie/confintea/pdf/6a.pdf>

Excerpt from introduction:

The central aim of the workshop “Adult environmental education; awareness for environmental action” was to discuss the present state of environmental adult education, its major difficulties and shortcomings and to develop recommendations for the further development of this field. The Fifth International Conference on Adult education provided a unique opportunity to create a dialogue between policy-makers, educational planners, practitioners, and between governments and NGOs.

The workshop was jointly organised by the International Network for Sustainable Energy (INFORSE), the Learning for the Environment Programme (LEAP) of the International Council for Adult Education, the University of Lüneburg and the UNESCO Institute for Education, Hamburg. The panel discussion, chaired by Walter Leal Filho, University of Lüneburg, Germany, featured the following speakers: Ruth Kiwanuka, Joint Energy and Environment Projects, Uganda; Angele Fatou Sarr, FOPEN Solaire, Senegal; Zareen Myles, Women’s Action for Development, India; Pierre Foulani; Adoum Ngaba-Waye, CREFELD, Tschad; Raul A. Montenegro, Fundación Para la Defensa del Ambiente, Argentina. The Minister of Education from Lower Saxony, Professor Wernstedt, opened the session.

A poster session showing examples of adult environmental education in different regions of the world was also organised. This featured fuel wood saving and clay stoves in households in Uganda; education and information programmes for peasants in Senegal; household bio-gas systems in India; teaching adults about the environment in Argentina; and desertification in Africa.

*Also found under *Environmental Sustainability* and *Case Studies and Best Practice*

International perspectives on adult education

Imel, Susan

In: *Trends and Issues*, Alert No. 14, 2000

Columbus: Center on Education and Training for Employment, 2000

<http://www.cete.org/acve/docs/tia00082.pdf>

Excerpt from document:

Publications from the Fifth International Conference on Adult Education held in Hamburg, Germany, in July 1997 are a particularly rich source of information on international perspectives about adult education. Sponsored by the UNESCO Institute for Education (UIE), the conference brought together more than 1,500 adult educators from around the world who participated in plenary sessions, workshops, and roundtables to shape statements about adult education and develop actions for the future. A clear trend in the conference and the documents it produced was the critical importance of adult education and adult learning “for fostering ecologically sustainable development, for promoting democracy, justice, gender equity, and scientific, social and economic development, and for building a world in which violent conflict is replaced by dialogue and a culture of peace based on justice” (UIE 1997a, p. 1).

Learning Communities National Project 2001: Audit Report 2002

Toowoomba Learning Community Network

Toowoomba: Toowoomba Learning Community Network, 2002, 29 p.

http://www.anta.gov.au/images/publications/Learning_Communities-Toowoomba.pdf

Description from VOCED website:

Some communities in rural and regional Australia have become known as 'learning communities' as they concentrate on learning to promote social cohesion, regeneration and economic development in the face of challenges, many of which are generated as the globalised knowledge economy emerges. In 2001, the Australian National Training Authority (ANTA) launched its learning communities pilot national project to encourage the development of learning communities and learn more about them. Ten rural and regional communities received funding to undertake a learning audit as the initial stage of becoming a learning community. As part of the project, each community completed an audit of their learning strategies and capacity to become a learning community. These audits consistently reveal a number of common themes that are seen as being essential for the sustainable development of learning communities. This is the story of Toowoomba, Queensland.

Lifelong learning for a sustainable future

Trorey, Gillian; Cullingford, Cedric; Cooper, Barrie

In: Oliver, Paul, Lifelong and continuing education

Aldershot: Ashgate Publishing, 1999, p. 195-214

ISBN 1 840 14905 1

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=28313736>

Description from website:

Environmental education is seen as the most significant example of lifelong learning as it involves issues that affect all age groups. This chapter explores various statements from political agencies about lifelong learning and environmental education and the differences between them and their delivery into action are analysed.

The regional framework for adult and youth education in Latin America and the Caribbean (2001-2010)

de Gainza, Maria Luisa Jauregui

In: Medel-Anonuevo, Carolyn, Integrating lifelong learning perspectives, International Conference on Lifelong Learning, Beijing, 2001

Hamburg: UNESCO Institute for Education, 2002, p. 59-64

ISBN 9 282 01115 1

<http://www.unesco.cl/pdf/programa/marcojoving.pdf>

<http://www.unesco.org/education/uie/publications/uiestud36.shtml> (all conference papers)

Description from VOCED website:

A five year collaboration between governments and civil societies in Latin America and the Caribbean resulted in the 'The regional framework for adult and youth education in Latin America and the Caribbean', a review of the socio-economic and educational situation in the region, as well as the challenges of poverty and illiteracy that the region faces. This paper analyses the framework and sets it into its social and educational context. The Framework identifies the populations most affected by the problems and challenges of life in an increasingly globalised world: out-of-school youth, poor women and Indigenous and poor peasant populations. Main areas of concern are indicated: literacy, education and work, citizenship and human rights education, education and gender and local and sustainable development. Four central aspects for adult and youth education are identified: (1) lifelong learning; (2) an amplified version of basic education which includes pre-school, elementary and secondary level education; (3) links between formal and non formal education; and (4) education for work. The importance of the creation of networks of cooperation to facilitate the exchange of information on programs and projects, the systematisation of practices and the sharing of experiences is emphasised.

The role of adult education in sustainable development

Olinga, Forough; Lubyayi, Margaret Nakato

In: Adult Education and Development, No. 59, 2002, p. 135-151

Bonn: Institute for International Cooperation of the German Adult Education Association (IIZ/DVV), 2002

ISSN 0342-7633

http://www.iiz-dvv.de/englisch/Publikationen/Ewb_ausgaben/59_2003/eng_Olinga.htm

Description from website:

This paper gives an overview of adult education in Uganda, paying particular attention to rural development. The paper explores the importance of adult education in sustainable development and highlights some of the challenges faced in the bid to provide education for the adult population in Uganda. The paper focuses mainly on agriculture, which is the backbone of the Ugandan economy and on which most other sectors depend.

Technical and vocational education in China: History, educational system and achievements, opportunities and challenges*

Rongguang, Dai

In: University of Technology, Sydney, *Working knowledge: productive learning at work: conference proceedings*, Working Knowledge: Productive Learning at Work, University of Technology, Sydney, 10-13 December 2000

Broadway, Research into Adult and Vocational Learning, 2001, p. 359-363

ISBN 1 863 65287 6

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=37383587>

Description from website:

Technical and vocational education (TVE), as an integral component of lifelong learning, has a crucial role to play in this area as an effective tool to realise the objectives of a culture of peace, environmentally sound sustainable development, social cohesion and international citizenship. The earliest vocational education in China may be traced back to the 1860s. Since China entered a new historical era of reform and opening to the outside world in 1978, TVE in China has been injected with tremendous vitality for development, and has gained a lot from international exchanges of experience. In building the communities for the twenty-first century, China will make its great contributions. At the threshold of the twenty-first century, TVE in China meets both many opportunities and challenges as the great development of Western China starts.

*Also found under *Environmental Sustainability*

Policy Debate

21st century skills: Realising our potential: Individuals, employers, nation

United Kingdom Department for Education and Skills; dti; HM Treasury; Department for Works and Pensions (2003) [online]

<http://www.dfes.gov.uk/skillsstrategy/subPage.cfm?action=whitePaper.default>

Excerpt from website:

The Skills Strategy White Paper was launched in July 2003 and sets out the skills challenge and how it will be met. The Strategy aims to strengthen the UK's position as one of the world's leading economies by ensuring that employers have the skills to support the success of their business, and that employees have the necessary skills to be both employable and personally fulfilled. In order to do this we need to build a new skills alliance where every employer, employee and citizen plays their part.

Agenda 21

United Nations Department of Economic and Social Affairs – Division for Sustainable Development (2003) [online]

<http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm#pre>

Excerpt from preamble:

Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development. This global partnership must build on the premises of General Assembly resolution 44/228 of 22 December 1989, which was adopted when the nations of the world called for the United Nations Conference on Environment and Development, and on the acceptance of the need to take a balanced and integrated approach to environment and development questions.

Contents:

- Preamble
- Section 1: Social and Economic Dimensions
- Section 2 : Conservation and Management of Resources for Development

- Section 3 : Strengthening the Role of Major Groups
- Section 4: Means of Implementation
- The Rio Declaration
- Forest Principles

Before and after Rio: Sustainable development and VET in Australia

Anderson, Damon

Paper presented at the Educating for a Sustainable Future Workshop, Swinburne University of Technology, Victoria, May 2002

Unpublished, 2002, 16 p.

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=43839501>

Description from website:

At the 1992 United Nations Earth Summit in Rio de Janeiro, Australia committed itself to promote environmental education as part of its global action plan for sustainable development. Twenty three years ago in 1979, MacKenzie, in his paper 'The role of the technical college', had stated that TAFE tended to concentrate too heavily on its role in meeting industry needs for economically productive workers and neglected its role in preparing an environmentally aware workforce. In this paper, the author argues that in spite of McKenzie's pronouncement and Australia's contribution and commitment to the principles espoused at the Earth Summit, little has changed in vocational education and training (VET). He begins by looking at some of the reasons for this and then goes on to discuss the potential role and contribution of adult education and training to ecologically sustainable development. In his conclusion, the author reflects on how TAFE and the VET sector as a whole could begin to respond more effectively to the ecological imperative.

Beyond delusion: A science and policy dialogue on designing effective indicators for sustainable development

International Institute for Sustainable Development

IISD, 1999, 8 p.

<http://www.iisd.org/pdf/finalreport.pdf>

Description from IISD website:

From May 7th to 9th, 1999, 38 scientists, policy specialists from public and private sectors, researchers, and measurement experts came together in an innovative, multidisciplinary workshop held in San Rafael de Heredia, Costa Rica. Seventeen countries were represented from five continents. A listing of participants is provided in Appendix 1.

In general terms, the workshop's purpose was to examine the challenge of assessing progress toward sustainability. More specifically, discussions focused on two topics:

- On indicators for sustainable development and the feasibility of generating a short list of highly aggregated national-level indicators that would effectively supplement current reporting practice,
- On the process of channelling measurement results into decision-making and communicating sustainability indicators effectively.

Building a workforce for the 21st century

Blewitt, John

In: Adults learning, Vol. 13, No. 4, December 2001, p. 15-16

Leicester: National Institute of Adult Continuing Education (England and Wales), 2001

ISSN 0955-2308

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=39014040>

Description from website:

Since 1997, educational policy in the United Kingdom (UK) has gradually come to include concepts of social exclusion, employability, learning communities and regeneration. These trends have forced learning out of the traditional confines of the classroom and into the wider community. The author suggests that the wider perspective of sustainable development has been generally overlooked in major government policy documents addressing lifelong learning and skills development for the future. This brief article focuses on the role of education in regional sustainable development and outlines the development of a sustainable development education (SDE) strategy for Yorkshire and Humberside as an example. Issues for those engaged in formulating SDE policies in their own regions are highlighted.

"Curriculum Greening" in further education: A pilot study

Salter, John W.

Paper presented at the Scottish Educational Research Association Annual Conference, West Park Conference Centre, University of Dundee, September 30th - October 2nd 1999

<http://www.leeds.ac.uk/educol/documents/000001185.htm>

Excerpt from publication:

This research paper describes a Curriculum Project initiated by Elmwood College as a part of their BS7750 Environmental Management System. Staff members, from a range of Sections within the College were asked to select a course, or courses, from their own curriculum area and to specify courses with an identifiable environmental component and, from this, identify opportunities for introducing the concept of sustainability. Results are discussed in terms of specific cognate groups.

Finally the feasibility of "Curriculum Greening" at a local, grass roots, level is discussed in terms of the courses examined.

It is the intention of this paper to investigate the means by which recommendations of the Report of the Working Group on Environmental Education to the Secretary of State for Scotland, Learning for Life, can be implemented, specifically "Curriculum Greening" (for an explanation of this term see Ali-Khan, 1991). There would seem to be two possible approaches:

- Examining and validating bodies should "green" the curriculum at source so that during the Course validation process, environmental issues are built in to the entire FE Sector course provision over a 5-6 year time scale.
- FE Colleges could be proactive in curriculum issues by carrying out internal audits of environmental content.

It is this second approach that I would like to investigate in this paper.

Education for rural development: Towards new policy responses: A joint study conducted by FAO and UNESCO

Atchoarena, David; Gasperini, Lavinia (eds.)

Rome: Food and Agriculture Organization of the United Nations (FAO), 2003

Paris: UNESCO, International Institute for Educational Planning (IIEP), 2003

ISBN 9 551 04983 1 (FAO) / ISBN 9 280 31220 0 (UNESCO)

<ftp://ftp.fao.org/docrep/fao/006/ad423e/ad423e00.pdf>

Description from website:

This publication presents a new perspective for educational development in rural areas, reviews trends and innovations in basic education for rural children and looks at training issues and higher education strategies to foster knowledge and skills in rural societies. Poverty reduction and food security are at the centre of the development agenda. The concentration of poverty lies in rural areas where 70 percent of the world's poor live. Tackling the illiteracy and low school achievement in these areas is essential in achieving sustainable development. Therefore, poverty reduction strategies are now placing emphasis on rural development that encompasses all those who live in rural areas. For many years, the approach followed by policy-makers and education specialists has been to focus on practical and occupational agricultural skill training provided mainly at the secondary and tertiary levels. However, education for rural development requires an holistic approach going beyond the narrow boundaries of the traditional agricultural education and training concept. The book also counters conventional wisdom and educational policies that have guided the provision of education in rural areas for several decades. Various contributions describe current trends and innovations in improving the provision and quality of basic education in rural areas. On the practical side, it also discusses skill development challenges, and analyses emerging strategies developed by innovative higher education institutions to cope with the new educational and rural environment.

Education for sustainable development

Qualifications and Curriculum Authority, (2004) [online]

<http://www.nc.uk.net/esd/index.htm>

Description:

This website offers valuable advice and provides information on education for sustainable development (ESD). The site caters slightly to ESD topics of particular relevance for teachers and teaching institutions. The website content covers a range of ESD subjects including: the topic of SD itself, teaching with reference to

foundations, curricula, and specific subjects, school management including relevant policy and practice and professional development.

Education for sustainable development: Getting it right

Thomas, Pamela; Bessell, Sharon (eds.)

Canberra: Development Studies Network, 1999, 199 p.

ISBN 0 731 53315 1

<http://www.unescobkk.org/ips/som/som-2002-04.htm>

<http://www.undp.org.vn/mlist/develvn/051999/post157.htm>

Description from website:

Share the opinions, ideas and experiences of educators, researchers, aid workers, planners, project managers, students and civil servants on how best education can lead to sustainable development.

The book explores the relationship between education and social and economic development and the role that development assistance could and should play. The book contains 39 chapters covering the following topics:

- Introduction and summary of major policy issues for development assistance
- Education for sustainable development: Future options
- Towards more effective development assistance for education
- The impact of education on sustainable development
- Teaching for development in industrial countries: Lessons from experience
- Educational reform in Papua New Guinea: Opportunities for sustainable development
- Providing appropriate formal and technical education
- Alternative methods of education for development
- New partnerships for providing effective education
- New approaches to designing, financing and managing education projects

Education for sustainable development toolkit

McKeown, Rosalyn; with assistance from Hopkins, Charles; Rizzi, Regina; Chrystalbridge, Marianne

Knoxville: Energy, Environment and Resources Center, University of Tennessee, 2002, 142 p.

<http://www.esdtoolkit.org/>

http://www.esdtoolkit.org/esd_toolkit_v2.pdf

Description from website and 'Author's Note':

The *Education for Sustainable Development Toolkit* is an easy-to-use manual for individuals and organizations from both the education and community sectors. This resource addresses the potentially powerful alliance of school systems and communities working together to reach local sustainability goals. Together they can reorient existing curriculum to create locally relevant and culturally appropriate education.

The *ESD Toolkit* will be helpful as ministries of education, non-profit organizations, school system, communities, and other organizations prepare for United Nations Decade of Education for Sustainable Development 2005 - 2015.

The Education for Sustainable Development Toolkit is based on the idea that communities and educational systems within communities need to dovetail their sustainability efforts. As communities develop sustainability goals, local educational systems can modify existing curriculum to reinforce those goals. As we developed the Toolkit, it became apparent that many communities have not developed sustainability goals or action plans on which to base educational change. As a result, we include some exercises to help communities develop such goals. We also include a few exercises to explain the concept of sustainable development.

The emerging international framework for accreditation

Stanger, David H.

Winnipeg: International Institute for Sustainable Development, 2002

http://www.iisd.org/pdf/2002/trade_standards_framework.pdf

Description from IISD website:

There is a significant amount of international effort being put into the development of an international framework for the mutual recognition of conformity assessments. Recognizing the importance of this to the research undertaken under this project, IISD commissioned this paper by David Stanger, which outlines the latest international developments in private conformity assessment services. Stanger is Director General of the

International Union of Independent Laboratories, and participates actively on the Joint Committee for Closer Cooperation (JCCC) between the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC).

Indicators for sustainable development: Theory, method, applications

Bossel, Hartmut

Winnipeg: International Institute for Sustainable Development, 1999, 124 p.

ISBN 1 895 53613 8

<http://www.iisd.org/pdf/balatonreport.pdf>

Description from IISD website:

In Indicators for Sustainable Development, Dr. Bossel, an engineer and leading systems scientist, shows that we need indicators for sustainable development that provide reliable information about the natural, physical and social world in which we live, and on which our survival and quality of life depends. He illustrates that popular indicators like the gross domestic product are inadequate, as they inform us only about monetary flows and not about the state of the environment, the destruction of resources or the quality of life.

Joint ACBE, SDEP and TUSDAC response to "Building a stronger network": Developing the role of National Training Organisations*

Advisory Committee on Business and the Environment (2001)

*For full description, please see *Employment in the Sustainable Development Context*

Learning to last – Skills, sustainability and strategy

Cohen, Judith; James, Simon; Blewitt, John

London: Learning and Skills Development Agency (LSDA), 2002, 164 p.

ISBN 1 853 38793 2

<http://www.lsda.org.uk/files/PDF/1168R.pdf>

Description from website:

Learning to Last is a joint venture from the Learning and Skills Development Agency, Forum for the Future and the [UK] government's Sustainable Development Education Panel. Through a seminar series and this book, practitioners, policy-makers and academics consider how the principles and values of sustainable development should inform in the 21st century. Learning to Last seeks to stimulate debate and shape thinking on the need to integrate sustainability into all levels of post-16 learning.

Linking work, skills and knowledge: Learning for survival and growth

Gerster, Richard; Gerster Development Consultants (eds.)

International Conference, Interlaken, Switzerland, 10–12 September 2001,

Berne: Swiss Agency for Development and Cooperation (SDC), 2001, 287 p.

Languages: English, parts in French and Spanish

<http://www.workandskills.ch/downloads/ConferenceReportWS.pdf>

Contents:

- Overview
- Background
- Working Groups: Issue Papers, Key Inputs, Group Reports
 - Context and Regulatory Framework for Skills Development
 - Linking (post)basic Education and Training: a Way to Fulfill the Needs of Youth and Adults for Generic and Vocational Skills?
 - Costs and Financing of Skills Development
 - What Skills are Needed to Ensure Survival and Growth of Enterprises?
 - What is the Role of International Co-Operation in Skills Development?
- Interlaken Declaration
- Annexes
 - List of Participants
 - Detailed Programme
 - Excursions to Swiss Institutions: Final Report (E)

- Evaluation (E)
- List of Papers Submitted by Participants

Managing farmers' training for sustainable agriculture development

Keshava

In: Indian Journal of Training and Development, Vol. XXXII, No. 4, October-December 2002, p. 64-71

New Delhi: Indian Society for Training and Development, 2002

ISSN 0971-5592

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=46473174>

Description from website:

In the era of fast changing technology, farmers' training has become an important area of investment for accelerating transfer of technology in the rural sector. But training programs are, most often, being organised very casually, leading to no visible impact in the field. A systematic approach to training is needed to make it effective. The paper deals in detail with different steps of the training cycle as well as those aspects of training which are generally ignored while organising it.

National education policies and programmes and international cooperation: What role for UNESCO?

Jallade, Lucila; Radi, Mohamed; Cuenin, Serge

Paris: UNESCO, 2001, 91 p.

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=37332698>

Description from website:

Education has been considered a critical linchpin to obtain the goal of achieving sustainable development and poverty reduction. Support for educational development and reform has been at the centre of the agenda for international development cooperation and the focus of international aid in recent years has been to provide coordinated support to sector-wide national programs under national leadership. This book provides a 'bird's eye view' of this evolution as experienced by UNESCO. Information is presented in four main chapters: The national context: the elaboration of education policies and programmes: issues and trends; The international context: financial and technical cooperation for development: trends; National education policies and programmes: a framework for analysis; The role of UNESCO in the elaboration of national education policies and programmes. The first two chapters review the national and international education policies and programs in developing countries and include a discussion of the amounts disbursed as international aid for education, and strategies and approaches of the aid agencies in relation to national policies. Chapter three is concerned with education policies and the emphasis is on the role of technical inputs in decision making. It specifies the field of work and the main concepts and prospects. The final chapter describes the services provided by UNESCO to its Member States in the field of upstream activities and explores orientations for its future role.

The new frontiers of education*

Carneiro, Roberto (2002)

*For full description, please see *Sustainable Livelihoods*

On the road again: Supporting VET development in a globalised context*

Volkoff, Veronica; Perry, Jane

Paper presented at the Fourth International Conference "Vocational Education and Training Research", University of Wolverhampton, 16-18 July 2001

<http://www.leeds.ac.uk/educol/documents/00001780.doc>

Description from abstract:

In many developing countries, globalisation and technological change have created urgent demands for new forms of skill development to meet economic and social needs. This has in turn required the establishment and renewal of training institutions and programs, and the professional development of VET practitioners. The authors of this paper have been involved in vocational education and training development projects in South Africa, China and India. Their work has included: comparative research of vocational education and training systems; development and teaching of courses, including by distance; institutional and systemic capacity building; establishment of mentor programs; design of a five year program of VET reform in China. Through facing the challenges of work in these cross-cultural and multi-lingual contexts, the authors have identified needs for the development of specific skills and capacities for international project teams to enable effective

assistance for sustainable development. Within a context of changing dimensions of vocational education and training, the importance of integrating research and learning with doing has been highlighted. This paper discusses the demands of such activities and proposes a model that suggests principles, skills and knowledge and integrating capacities for international teams.

*Also found under *Case Studies and Best Practice*

Productivism, sustainable development and vocational education and training*

Anderson, Damon

In: Searle, Jean; Roebuck, Dick (eds.), *Envisioning practice – implementing change*, International Conference on Post-compulsory Education and Training: 10th, Australia, 2002

Brisbane: Australian Academic Press, 2002, Vol. 1, p. 61-68

ISBN 1 875 37844 8

http://www.avetra.org.au/Conference_Archives/2003/documents/PA066Anderson.pdf

Description from website:

Historically vocational education and training (VET) has fuelled the engine of economic growth and productivity in western industrialised nations. As markets become increasingly global and competitive, governments are intensifying pressure on national VET systems to produce more highly skilled and employable workers. 'Jobs and growth' is now the universal mantra of policy makers and the taken-for-granted *raison d'être* of VET. In an era of manufactured risk and ecological crisis however, it is imperative to question the truth-claims on which VET resides. This paper argues the need for a fundamental re-envisioning of VET for an ecologically sustainable future. In doing so, it examines the discourse of productivism and its constitutive effects on VET policy and practice. The logic and assumptions that underpin contemporary constructions of VET are critiqued. The potential role and contribution of VET in the transition from productivism to ecological sustainability are discussed and central dilemmas and challenges are outlined.

*Also found under *Environmental Sustainability*

Report on Educating for a sustainable future – Workshop

Barrow, Ron; Condon, Linda

Victoria: Swinburne University of Technology, 2002, 23 p.

<http://www.vta.vic.edu.au/scholarships/Reports/LCondon&RBarrow%20TSP%20%20Appendices.pdf>

Table of contents:

- Sustainable Development and Agenda 21 – The Big Picture
- Concern for Education Today
- Gathering Australian Views
- Views Expressed
- What is the role for TAFE and other educators in achieving a Sustainable future?
- How can Training packages provide a vehicle for Educating for a Sustainable Future?
- How are issues of Sustainability presently being incorporated in Training and Tertiary Education?
- What research is being undertaken to examine the most innovative and effective ways to integrate sustainable concepts and practices into everyday training?
- General Comments
- Discussion
- Role of the training institution
- Actions
 - Action 1: Incorporate Sustainability into educational programs.
 - Action 2: Provide industry and community guidance.
 - Action 3: Develop educationally sound methods for incorporation of Sustainability
 - Action 4: Practice what we preach – Organisational ethos
 - Action 5: Professional Development for educationalists.
 - Action 6: Develop a national network
 - Action 7: Lobby government and funding agencies for support
- Appendix 1

Re-engineering education for sustainable development: Innovations in educational reform in Thailand

Kaewdang, Rung

In: Educational innovation for sustainable development: report of the Third UNESCO-ACEID International Conference, UNESCO Principal Regional Office for Asia and the Pacific Asia-Pacific Centre of Educational Innovation for Development (ACEID), Third UNESCO-ACEID International Conference: Educational Innovation for Sustainable Development, Bangkok, Thailand, 1-4 December 1997

Bangkok: UNESCO Principal Regional Office for Asia and the Pacific, 1998

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=21986086>

Description from website:

This paper highlights that education has been, and will be, the most important mechanism for sustainable development. Thailand has long perceived education as a driving force for the economic and social development of the nation. In order to cope with the dramatic change, Thailand, like many countries, launched education reform to gear the education system toward the 21st century. The author stresses that local education authorities and schools need to be re-engineered for the efficiency of their educational services. The paper focuses on the need for reform aimed at achieving greater response to the needs of people without destroying future developmental potential. Secondly, educational reform would enable learners to embrace self-directed learning. The author emphasises that one of the most important aspects of the process of re-engineering education will be the change of significance, from education to learning, from suppliers to demanders and from administrators to learners, in order to provide quality education which is responsive to the needs of learners.

The sustainable development action plan for education and skills

United Kingdom Department for Education and Skills (2003) [online]

Website: <http://www.teachernet.gov.uk/wholeschool/sd/actionplan/>

Full-text: http://www.teachernet.gov.uk/doc/5295/Sus_Report_Single.pdf

Description from website:

The DfES Action Plan is organised around four objectives:

- Education for sustainable development
- The environmental impact of the DfES and its partner bodies
- The environmental impact of the education estate
- Local and global partnership activity

The plan is not a bureaucratic add-on, but is aimed at promoting local activity. The intention is to encourage and support schools and other educational institutions to develop coordinated ways of teaching about and implementing sustainable approaches.

The Department will be communicating and disseminating advice, and working with a wide range of organisations from NCSL, the TTA and QCA to trade unions, subject associations and NGOs. There will also be an emphasis on the international context for sustainable development, including an annual International Education Week and a new website, the Global Gateway for Schools.

Sustainable development and youth work

Development Education Association; Council for Environmental Education (2001) [online]

http://www.dea.org.uk/downloads/y_sde-yw-1.pdf

Excerpt from Introduction:

Have we missed anything? That was the gist of two of the questions at the end of the Transforming Youth Work consultation document. It asked whether all the key issues for youth work had been covered, and wondered what other measures might be introduced to strengthen its approach to quality. Yes, there is something missing: sustainable development. The phrase may not be snappy, but it is vitally important to the forthcoming changes to youth work and the youth service. This briefing paper explains how and why the concept can be integrated into current youth work thinking and planning. It argues for a holistic approach to young people's needs, values, rights and responsibilities – seeing them fully in context and as part of a dynamic network of relationships with others.

The briefing sets out a series of recommendations designed to ensure that the planning and delivery of services to young people are informed by current thinking on sustainable development.

Sustaining innovation in technological innovation

Lawrenz, Frances; Keiser, Nanette; Lavoie, Bethann

In: Community College Review, Vol. 30, No. 4, Spring 2003, p. 47-63

Raleigh, N.C.: Dept of Adult and Community College Education, North Carolina State University, 2003

ISSN 0091-5521

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=47665646>

Description from website:

In today's rapidly changing job market, occupational and technical programs are especially important components of community colleges. To improve education for technicians in advanced technology fields, the National Science Foundation (NSF) developed the Advanced Technological Education (ATE) Program to develop sustainable projects. This article reports on research that used the ATE projects as a data source to answer the research question: Which characteristics related to sustainability are exhibited by a set of technical education programs?

The results of the study are discussed under the headings of collaboration, program improvement and professional development. Among the implications of the findings are: sustainability of innovations in technical education appears to be an attainable goal; the ATE projects were successful at developing and maintaining collaborations; constant change in the technology fields requires constant updating of programs and materials and the concurrent professional development of faculty members; the processes in place in community colleges are not designed to be responsive to this rapid change; leading-edge technology programs are also very high risk because materials necessary for an innovative program may become out-of-date quickly and have little opportunity for alternative use; and cutting-edge programs require instructors with cutting-edge skills. The authors conclude that to help ensure the sustainability of technical education innovations, the following steps should be taken: strengthening the existing structure of internal and external collaborations; designing programs that are not only progressive, but also allow expensive equipment to have future uses; allowing programs of study to have the required depth to fit into the high-need areas as well as have enough basic understanding so that both the students and the program itself can respond to the changing job market; ensuring the professional development of faculty is supported in terms of opportunities and rewards; and determining the data necessary for the programs to market themselves.

UNESCO and The International Decade of Education for Sustainable Development (2005-2015)

In: Connect – UNESCO International Science, Technology & Environmental Education Newsletter, Vol. XXVIII, No. 1-2, 2003

Paris: UNESCO, 2003

ISSN 0250-4499

<http://www.unesco.org/education/educprog/ste/index.html>

<http://unesdoc.unesco.org/images/0013/001306/130632e.pdf>

Excerpt from publication:

The outcomes of the Johannesburg Sum-mit and the establishment of a Decade of Education for Sustainable Development affirm the need to integrate sustainable development into education systems at all levels in order for education to be a key agent for change. The Decade aims to promote education as the basis for sustainable human society and to strengthen international cooperation toward the development of innovative policies, programmes and practices of education for sustainable development (ESD).

UNESCO – Education for sustainable development website

UNESCO (2001) [online]

Paris: UNESCO

<http://www.unesco.org/education/esd/>

Description from website:

The transdisciplinary project "Educating for a Sustainable Future" was launched in 1994 as the principal mechanism within UNESCO to follow-up the recommendations concerning education made by the major UN conferences of the 1990s and the conventions on biological diversity, climate change and desertification, and intended to mobilize, integrate and innovate within the Organization across sectoral lines.

The project was organized on an experimental basis, in order to serve as a vanguard for UNESCO by bringing it closer to the realities within Member States, and by developing new modalities of planning and action.

ESD's work is based on the three-pronged concept of transdisciplinarity, innovation and partnering and has established close links with the rest of UNESCO's work in education, as well as with other sectors of the Organization and partners of UNESCO world-wide.

UNESCO's programme on technical and vocational education for the first decade of the new millennium

Power, Colin

Paper presented at the International Congress on Technical and Vocational Education: 2nd, Republic of Korea, 1999

Unpublished, 1999, 11 p.

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=24047555>

Description from website:

This paper comprises an address made by the Deputy Director-General for Education UNESCO, Colin Power, to the Second International Congress on Technical and Vocational Education held in Seoul, Korea, April 1999. It explores the effect of growing economic globalisation on the provision of technical and vocational education and training (TVET) and outlines the proposed main objectives in UNESCO's future strategy. These are: strengthening technical and vocational education (TVE) as an integral component of lifelong education; orienting TVET for sustainable development; and providing TVE for all. Also described is the proposed structure for the implementation of UNESCO's International Programme on Technical and Vocational Education.

United Nations Decade of Education for Sustainable Development

UNESCO (2004) [online]

<http://portal.unesco.org/education/en/ev.php->

[URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html](http://portal.unesco.org/education/en/ev.php-URL_ID=27234&URL_DO=DO_TOPIC&URL_SECTION=201.html)

Description from website:

In December 2002, resolution 57/254 on the United Nations Decade of Education for Sustainable Development (2005-2014) was adopted by the United Nations General Assembly and UNESCO was designated as lead agency for the promotion of the Decade.

This site shares elements of a framework for developing a draft international implementation scheme for the United Nations Decade of Education for Sustainable Development in close consultation and collaboration with our partners at local, national, regional and international levels.

United Nations Decade of Education for Sustainable Development (2005-2014): Framework for the international implementation scheme

UNESCO (2003) [online]

General Conference 32nd session information document, 2003, 12 p.

<http://www.unevoc.unesco.org/sustainable/docweb/32C-Inf9-e.pdf>

Excerpt from publication:

In December 2002, resolution 57/254 on the United Nations Decade of Education for Sustainable Development (2005-2014) was adopted by the United Nations General Assembly and UNESCO was designated as lead agency for the promotion of the Decade. This document contains elements for developing a draft international implementation scheme with a timetable for activities up to December 2005.

Using work-based learning to develop education for sustainability: A proposal*

Coll, Richard K.; Taylor, Neil; Nathan, Subhashni

In: Journal of Vocational Education and Training, Vol. 55, No. 2, 2003, p. 169-181

Oxford: Triangle Journals, 2003

ISSN 1363-6820

http://www.triangle.co.uk/vae/content/pdfs/55/issue55_2.asp#3

Description from Website:

The pragmatist model of experiential learning in the form of work placements in industry provides opportunities for tertiary institutions to produce well-rounded graduates, possessing knowledge of workplace culture and values along with technical competencies. Work-based learning programs provide graduates and leaders of tomorrow for a variety of business in the manufacturing sectors; such graduates are reported to

rapidly advance in companies, and assume middle and senior management roles. Here, the authors propose that such employees need to develop an understanding of sustainability and suggest that work-based learning could act as a vehicle for delivering education for sustainability (EfS). This article begins with a description of the principles that underpin concepts for sustainability and EfS, and examines three models as to how work-based learning programs could act as a vehicle for delivering EfS.

*Also found under *Workplace Learning and Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

Vocational training for sustainable development

BIBB – Federal Institute for Vocational Training (2003) [online]

<http://www.bibb.de/en/5365.htm>

Description from website:

Sustainability is a visionary philosophy which is receiving increasing attention in business and society. This notion can be traced back to Agenda 21, a global agreement between more than 160 countries in Rio in 1992. A balance between economic, environmental, social and global factors and interests is the objective.

Vocational training can and must make a specific contribution to the implementation of this philosophy. Wide-ranging measures relating to information and communication, research and development can be secured and supported in a qualified manner e.g. by pilot projects, good-practice compendiums, conferences involving actors.

As one result of the more intensive discussion, not least due to the Congress “Learning and structuring the future – training for sustainable development” of the BLK (Bund-Länder Commission for Educational Planning and Research Promotion), BIBB began in June 2001 to establish a new focal point in its work, “vocational training for sustainable development”, by among other things establishing a multi-department working group and assuming the leadership over a multi-institution Federal Vocational Training Working Group for Sustainability.

Workplace Learning

Comparative study on sustainable development training in technical and vocational schools (TVS) in selected countries*

UNESCO (2004)

*For full description, please see *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

Environmental practice at work*

Environmental Practice at Work Publishing Company Limited (2001)

*For full description, please see *Employment in the Sustainable Development Context*

Professional Education and Training for Sustainable Development in Italy: Summary

Biondi, V.; Doria, L.; Istituto di economia delle Fonti di Energia e dell’Ambiente (IEFE)

Unpublished: European Foundation for the Improvement of Living and Working Conditions, 2000

<http://www.eurofound.eu.int/publications/files/EF0070EN.pdf>

Description:

This document consists of a list of 16 bullet point entries summarizing the research findings of this group of authors on the topic of ‘Professional Education and Training for Sustainable Development in Italy’. Following this is a list of recommendations for future policy making and initiatives.

Professional education and training for sustainable development in SMEs*

Hilton, Mark; Smith, David

Luxembourg: Office for Official Publications of the European Communities, 2001, 98 p.

ISBN 9 289 70101 3

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=40006193>

Description from website:

This report synthesises the findings of nine national studies on the current provision of environmental and sustainable development training in small and medium-sized enterprises (SMEs) commissioned by the European Foundation for the Improvement of Living and Working Conditions and undertaken between 1998 and 2000. The studies covered the industrial sectors of specialty chemicals, food and drink, and printing in the European Union Member States of Belgium, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden and the United Kingdom (UK). The report examines existing training structures, institutions and curricula, assesses current training provision, and attempts to identify trends at local/regional, national and European levels, as well as the social partner level. Recommendations are made for future action by the various actors including the social partners. The authors highlight practical opportunities for innovative measures and initiatives, showing how existing training can be made more accessible via new delivery methods such as distance learning and virtual learning.

*Also found under *Case Studies and Best Practice*

Professional Education and Training for Sustainable Development in Spain: Summary

Alza, Corral; Bilbao, Isusi, IKEI consultants

Unpublished: European Foundation for the Improvement of Living and Working Conditions, 2000

<http://www.eurofound.eu.int/publications/files/EF00123EN.pdf>

Excerpt from publication:

Environment is not yet conceived as a strategic issue within most of the Spanish enterprises' general management. Thus, and generally speaking, environment is regarded in Spain more as an additional cost rather than as an opportunity or a social obligation, where adaptation to existing legislation is regarded as the main driving force for adopting environmental-friendly decisions. In fact, it is possible to argue that, at this moment, there is not a true and widely accepted environmental culture amongst the Spanish enterprises.

However, this perception seems to be gradually changing, especially amongst the larger companies, in the sense that the Spanish large industrial enterprises are gradually shifting towards an environmental consciousness, where environment is increasingly included as a strategic value within the general enterprise management.

Sustainable Development Research Centre

School for Environmental Entrepreneurship (2004) [online]

<http://www.sustainableresearch.com/index.html>

http://www.sustainableresearch.com/pages/documents/SEETrainingCoursesOutlines_001.doc

Description from website:

The Sustainable Development Research Centre (SDRC) is creating a School for Environmental Entrepreneurship (SEE) to be located in the Horizon Scotland Incubation and Innovation Centre at the Enterprise Park in Forres.

SEE is being created to provide an opportunity to develop and facilitate the transfer of knowledge on the environmental, social and economic issues that affect individuals, companies and communities.

Courses SEE Training Courses Outlines

SEE will also be providing a range of vocational and non-vocational courses for individuals and businesses to further develop their environmental skills and knowledge. These courses will be designed specifically to meet short and long term learning needs.

Environmental Entrepreneur

Everyone has the potential to be an environmental entrepreneur. Whether through the invention of a new environmental process, the creation of an environmental voluntary group or leading a local community environmental project, SEE exists to stimulate new ideas and motivate action. Members of SEE will benefit from free or subsidized seminars and courses to help the identification of ideas and business development opportunities.

Training for sustainable development: Report on a European seminar

Medhurst, James

Conference report of the European Seminar on Training for Sustainable Development, Brussels, 9-10 July 1997

Luxembourg: Office for Official Publications of the European Communities, 1999, 77 p.

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=28790516>

Description from website:

New training needs have arisen out of the rise of green consumerism and the promotion of sustainable development. Increasing numbers of companies are now specifying minimum environmental performance/social responsibility standards of their suppliers, who must comply if they are to maintain business. This document is a report of a seminar organised by the Foundation in cooperation with representatives of Directorates General V, XI and XII of the European Commission. The aims of the seminar were: to highlight the principal challenges facing European professional training schemes and programs; to establish the specific problems to be addressed; and to identify the priorities for action. The contents of the report are: Training for sustainable development; Workshop 1 - industrial development; Workshop 2 - rural development; Workshop 3 - services; Conclusions; Recommendations. Also included as appendices: Seminar program; list of participants; and background paper to the seminar.

Training in environmental management: Industry and sustainability

Ulhoi, John; Madsen, Henning; Kjaer, Marie

Luxembourg: Office for Official Publications of the European Communities, 1999, 43 p.

ISBN 9 282 82242 7

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=26516688>

Description from website:

Sustainable development requires innovative strategic approaches at organisational level as well as a range of new skills and competencies throughout the workforce. The development of appropriate training materials and courses is an essential part of this equation. This report presents an overview of the Foundation's research and findings on environmental management training requirements in industry in the European Union from 1993-1998. The first part of the 'Training in Environment Management' project was carried out in 1993-1994 and covered Denmark, Germany, France and the UK. It was based on existing literature, enquiries and case studies and looked into corporate environmental and resource management introduced in recent years in a number of European companies and the education and training provision which is and will be required in relation to managers concerned with developing integrated and environment-related industrial and business strategies. The second part of the project, covering Denmark and Germany only, was undertaken in 1995 and combined existing knowledge and original research. It focused on the role and education and training requirements of categories of lower management and skilled and semi-skilled workers. The third part of the project examined the role and education and training requirements of categories of middle management involved in the implementation of the new corporate responses to environmental challenges. It was carried out in 1996-1997, in Denmark, Germany and Finland and was based primarily on enquiries and case studies. This publication contains four chapters: Chapter 1 provides an overview and introduction; Chapter 2 focuses on environmentally innovative industrial practices and training activities at different levels of a company; Chapter 3 examines environmentally innovative education and training institutions; and Chapter 4 presents conclusions and recommendations.

Using work-based learning to develop education for sustainability: A proposal*

Coll, Richard K.; Taylor, Neil; Nathan, Subhashni (2003)

*For full description, please see *Policy Debate*

Workplace research and education for sustainable development*

Gereluk, Winston; Royer, Lucien (2001)

*For full description, please see *Case Studies and Best Practice*

EMPLOYMENT IN THE SUSTAINABLE DEVELOPMENT CONTEXT

Adult education and jobs, or sustainable livelihoods?

Lawrence, John

In: Singh, Madhu (ed.), *Adult learning and the changing world of work*, Fifth International Conference on Adult Education (CONFINTEA V), Hamburg, Germany, 14-18 July 1997, p. 63-67

Hamburg: UNESCO Institute for Education, 1998

<http://www.undp.org/sl/publication/sl-john.pdf>

Description from VOCED website:

This paper was presented at the Fifth International Conference on Adult Education (CONFINTEA V), organised by the UNESCO Institute for Education in cooperation with UNEVOC and held in Hamburg, Germany, from 14-18 July 1997.

In this paper, the author investigates human resource development strategies for the future in the light of three major contradictions facing those engaged in creating jobs as a matter of policy. These are: that full-time employment does not sustain livelihood for many workers and hence reducing unemployment will not reduce poverty; improved labour market practices apply mainly to formal modern sector activity and the majority of the world's workforce exists outside the range of such policies; and continued economic growth to counteract unemployment is economically and environmentally unsustainable. The author discusses the concept of sustainable livelihoods, particularly for those in poverty and its implications for adult education systems, as an alternative to the traditional linear relationship between one person and one job.

Business and entrepreneurship education for the 21st century*

Cloud, Jaimie; Martin-Kniep, Giselle (eds.) (2003)

*For full description, please see *Case Studies and Best Practice*

Daring to lead with hope – Association of Professors and Researchers in Religious Education Presidential address, November 3, 2002*

Wimberly, Anne E. Sreaty (2003)

*For full description, please see *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

Environmental Activities Report, 2003*

Yamaha Motor Co., Ltd. (2003) [online]

http://www.yamaha-motor.co.jp/eng/environment/report/2003/pdf/env03_e00-01.pdf

Description from website:

Our editorial policy for the Yamaha Motor Co., Ltd. 2003 Environmental Activities Report is to report on our FY2002 environmental activities from the perspective of a “broad definition” of environment based on the concept of “sustainable development.” The report is published in two volumes, this Report (Abstract) that treats environmental themes, and a Data Book that lists detailed information.

An English version of this Report (Abstract) is also available in PDF format. Information about Yamaha Motor’s environmental activities can be seen anytime on the Yamaha Motor Co., Ltd. website. This Report and the 2003 Environmental Activities Data Book will also be posted on the Yamaha Motor website in due order.

- About the subjects and time frame covered in this Report
- The subjects covered pertain mainly to Yamaha Motor Co., Ltd.
- The time frame covered is April 1, 2002 to Mar. 31, 2003
- The next environmental activities report is planned to be published in June 2004.

Contents:

- Message from the President
- Approach to Environmental Activities “Corporate Social Responsibility” – Being a Corporation Striving for Sustainable Development

- Environmental Activity Topics: Environmental Activities for Sustainable Development – Review of our 2002 issues
- Financial Evaluation of Environmental Activities: Economic Dimension of Sustainable Development – Financial Status and Environmental Cost
- Global Warning Measures: Environmental Dimension of Sustainable Development – Greenhouse Gases and Climatic Change
- Measures for Toxic Substances: Environmental Dimension of Sustainable Development – Toxic Substances, Health and Safety
- Measures for Waste: Environmental Dimension of Sustainable Development – Waste and Conserving Resources Environmental Management System: System to Ensure Sustainable Development – Organizations for an Environment-Conscious Corporation
- Measures Outside the Company: Social Dimension of Sustainable Development – The Social Environment and People
- Measures Inside the Company: Social Dimension of Sustainable Development – The Social Environment and People
- Measures Inside the Company: Social Dimension of Sustainable Development – Measures for Our Employees
- Environmental Action Plan: YMC Group’s Environmental Action Plan and Commitment

*Also found under *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

The environmental impact on employment

Dallywater, Nahrel

In: Western Australia. Dept of Training, *Working visions international employment futures conference 2001*, Working Visions International Employment Futures Conference, Perth, WA, 2001
East Perth: Dept of Training, 2001, 14 p.

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=39830384>

Description from website:

This presentation outlines how development and the environment must co-exist for a sustainable future. It shows how the community, local and state governments and industry are creating jobs from trash. It concludes with the note that with the efforts to manage and minimise waste increases, so too will the number of sustainable jobs required to meet that need.

Environmental practice at work*

Environmental Practice at Work Publishing Company Limited (2001) [online]

http://sd-online.ewindows.eu.org/Training/URL_217

<http://www.epaw.co.uk/>

Description from website:

This NTNU hour learning programme is for supervisors, team leaders and union representatives and other interested people in work. Web based materials enable candidates to carry out activities and collect evidence at work for assessment and accreditation to national Vocational Qualifications standards (level 3) verified by a national awarding body.

The programme consists of four units:

- developing environmental awareness
- carrying out environmental risk assessment
- environmental good practice, in order to promote sustainable development.

*Also found under *Workplace Learning*

Framing the future: Projects 98

Australian National Training Authority

Melbourne: Australian National Training Authority, 1998, p. 29

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=21119625>

Description from website:

Framing the future is a major staff development initiative of the Australian National Training Authority (ANTA). The initiative supports people in the vocational education and training (VET) sector who are

involved in implementing the National Training Framework (NTF). The project promotes sustainable work-based learning structures for staff development which can be implemented throughout the national VET sector. This publication briefly outlines projects funded through Framing the Future, providing information about individual projects, contact names, project summaries and project timelines.

Joint ACBE, SDEP and TUSDAC response to "Building a stronger network": Developing the role of National Training Organisations*

Advisory Committee on Business and the Environment (2001) [online]

Joint Response: <http://www.defra.gov.uk/environment/acbe/pubs/network/network.htm>

Original Document: <http://www.wales.gov.uk/subieducationtraining/content/life/nto-consult-e.pdf>

Description from website:

The Advisory Committee on Business and the Environment (ACBE), the Sustainable Development Education Panel (SDEP) and the Trades Union Sustainable Development Advisory Committee (TUSDAC) welcome the opportunity to respond to the consultation paper Building a Stronger Network. We have chosen to respond jointly because of our common interest in the role NTOs can play in achieving sustainable development. This response offers our views on the proposed structure and roles of NTOs in the context of moving towards sustainable development and provides some preliminary ideas for how to move forward.

*Also found under *Policy Debate*

Sustainable agriculture, training course*

The Warmonderhof Training Centre (2002) [online]

http://sd-online.ewindows.eu.org/Training/URL_419

<http://www.warmonderhof.nl/WH%20Projects%20Desk/index.htm>

Description from website:

The Warmonderhof Training Centre has developed and organised a Training Course dedicated to the development of an Sustainable Agriculture Curriculum for vocational education.

The purpose of this course is to enable teaching staff of vocational education to conceive a training plan for future farmers, based on the demands of the agricultural profession in the next decade. Extension institutes as well as rural development policy makers could also benefit from participation in a dedicated course.

*Also found under *Sustainable Livelihoods*

STEWARDSHIP: INFLUENCING ATTITUDES, AWARENESS, BEHAVIOURS AND LIFESTYLES

Comparative study on sustainable development training in Technical and Vocational Schools (TVS) in selected countries*

UNESCO (2001) [online]

Paris: UNESCO

<http://www.unesco.org/education/esd/english/activities/vocation.shtml>

Description from website:

Graduates of technical and vocational schools will play a crucial part in inventing and implementing practical solutions to current problems such as environmental degradation. They must, therefore, be aware of the concept and challenge of sustainable development. As underlined in the recommendations of the Second International Congress on Technical and Vocational Education (Seoul, 26-30 April 1999), technical and vocational education systems should not focus only on economic dimensions, but should also incorporate emerging issues such as the use of environmentally sound technology.

Technicians represent an interface between nature, technology, economy and society and, thus, have a key role to play in helping society respond to environmental and development issues. They will be called upon to face challenges such as reorienting technology, managing risks, satisfying essential needs – food, water and sanitation – whilst conserving natural resources and reducing energy consumption. Technicians whose awareness is heightened to the issue of sustainable development and who have acquired practical skills in this respect will ultimately work in a more sustainable manner since they will be the ones directly involved in industrial and agricultural production.

It has been proposed that UNESCO, in its programme on technical and vocational education, should assist Member States through advocacy and training programmes that include environmental issues to promote the cross-cutting skills demanded by the contemporary world of work (Draft Programme and Budget 2002-2003). This will require a review of what has already been achieved in this field, lessons learnt and what still remains to be done by an organization like UNESCO, in particular for developing countries.

*Also found under *Workplace Learning*

Daring to lead with hope – Association of Professors and Researchers in Religious Education Presidential address, November 3, 2002*

Wimberly, Anne E. Streaty

In: Religious Education, Vol. 98, No. 3, 2003, p. 277-296

Washington: American Educational Research Association, 2003

<http://taylorandfrancis.metapress.com/app/home/contribution.asp?wasp=pgwf2jlvwj7xw334gt7r&referrer=parent&backto=searcharticlesresults.1.1;>

Description from website:

Current relational crises in the global village and the damaging treatment of Mother Earth challenge religious educators to be leaders who will not shrink back from the responsibility of helping to create a better world. There is an intensifying call for these educators to carry out vocations that contribute to a sustainable communal and earth environment in which peace, love, justice, reconciliation, and the care of the environment reside. Religious educators are called on to dare to lead in ways that also kindle similar leadership in others. This address invites religious educators into a self-reflection process on their identity and vocation and proposes practices of hope filled leadership that center on a quest for a better world.

*Also found under *Employment in the Sustainable Development Context*

Education for sustainability: From Rio to Johannesburg: Lessons learnt from a decade of commitment UNESCO

A report on the lessons learnt about the contribution of education to sustainable development over the decade between the United Nations Conference on Environment and Development in 1992 and the World Summit on Sustainable Development (WSSD).

Paris: UNESCO, 2002, 46 p.

<http://unesdoc.unesco.org/images/0012/001271/127100e.pdf>

Excerpt from introduction:

Lifelong learning, including adult and community education, appropriate technical and vocational education, higher education and teacher education are all vital ingredients of capacity building for a sustainable future.

Content:

- Introduction
- Lesson 1 – A new vision of education
- Lesson 2 – Basic education
- Lesson 3 – Reorienting education
- Lesson 4 – Education for rural transformation
- Lesson 5 – Lifelong learning
- Issues, challenges and possible ways forward

Environmental activities report, 2003*

Yamaha Motor Co., Ltd. (2003)

*For full description, please see *Employment in the Sustainable Development Context*

Environmental business management: An introduction

North, K.

In: Management Development Series, No. 30, 2nd revised edition, 204 p.

Geneva: International Labour Organization, 1997

ISBN 9 221 09516 9

<http://www.ilo.org/public/english/support/publ/xttextman.htm#B87>

Description from website:

This best-selling introduction to the role of enterprises in the environment highlights opportunities for and threats to sustainable development. It encourages managers and policy-makers to take account of the needs of our threatened planet and dwindling natural resources and to redefine the commercial interests involved. This completely revised and updated edition covers such current issues as measurement of environmental performance, quality aspects and environmental management systems (EMS). Essential reading for business managers and those responsible for redirecting business activities. A video, *The Green Challenge*, illustrating points in the book is also available.

Environmental management system – A way to develop vocational skills*

Vaasa Vocational Adult Education Centre (2002) [online]

http://sd-online.ewindows.eu.org/Enterprises/URL_71

<http://www.vakk.vaasa.fi/english2002/default.htm>

Description from website:

Environmental Management System – A Way to Develop Vocational Skills is an ESF-funded ADAPT programme for SMEs which concentrates on three areas: education in environmental management systems; vocational education aimed at employees and environmental seminars.

The environmental management segment of the programme consists of eight core areas: information gathering; environmental review, policy, programme, system and statement; internal auditing and application/certification for registration. The vocational training concentrates on energy consumption, natural resource use, waste and emissions into air and water. The two seminars focus on environmental problems at regional and global levels.

The project focuses on workplace adaptation and the development of products, markets and training plans. It also provides consultancy and assessment services, whilst promoting networking, quality management and technology transfer.

*Also found under *Environmental Sustainability*

The importance of values education for TVET and its economic and human resource development program

Quisumbing, Lourdes R.

Paper presented at the Vision to Action – TVET Planning and Real Results for the 21st Century, UNESCO International Programme for Technical and Vocational Education and Training. Regional Conference, Adelaide Institute of TAFE, South Australia, 25-29 March 2001, p. 8
Unpublished, 2001

<http://www.ait.tafe.sa.edu.au/unevoc/2001conf/>

Description from website:

In this paper addressing the forum discussion theme of 'TVET and economic and human resource development', Dr. Quisumbing focuses on the recommendations of the Second International Congress on Technical and Vocational Education held in Seoul, Republic of Korea in 1999, and their implied requirement for the introduction of values education in TVET to ensure that it plays 'a crucial role as an effective tool to realise the objectives of a culture of peace, environmentally sound and sustainable development, social cohesion and international citizenship'.

Learning to last toolkit*

Learning and Skills Development Agency (2004) [online]

<http://www.lsda.org.uk/sustainable/toolkit/>

Description from website:

The Learning to Last Toolkit is one of the major outcomes of the Learning to Last initiative funded by the Quality and Standards Directorate of the Learning and Skills Council during 2002-03. Its purpose is to help practitioners and others interested in Education for Sustainable Development (ESD) to learn more about education and sustainability, to offer opportunities for getting involved in an existing network of ESD practitioners, and to offer guidance in the setting up, management and evaluation of future ESD projects. It will also offer a variety of links to useful organisations, reports and other publications.

*Also found under *Case Studies and Best Practice*

Learning to live together in peace and harmony: Values education for peace, human rights, democracy and sustainable development for the Asia-Pacific Region: A UNESCO-APNIEVE sourcebook for teacher education and tertiary level education

UNESCO

Bangkok: UNESCO Principle Regional Office for Asia and the Pacific, 1998, 182 p.

<http://unesdoc.unesco.org/images/0011/001143/114357eo.pdf>

Excerpt from introduction:

Inspired by the “four pillars of education” described in Learning: the Treasure Within (the report to UNESCO of the International Commission on Education for the Twenty-first Century), in particular the pillar on which the Commission has put greatest emphasis: “Learning To Live Together”, the APNIEVE experts group met in Malacca, Malaysia (1-5 July 1996) articulated the Asia-Pacific longing for peace and harmony and agreed that a sourcebook entitled Learning to Live Together in Peace and Harmony should be produced. It would be based on international education and values education, with emphasis on peace, harmony, human rights, democracy and sustainable development in the region.

The sourcebook has three major emphases:

- the meaning of Learning To Live Together;
- the core and related values needed to live together successfully and peacefully;
- the development of learning experiences that will help teacher trainees and students actualize such values.

Contents:

Introduction

Chapter One – The APNIEVE Philosophy

Chapter Two – The Asia-Pacific: Context and Conceptual Framework

Chapter Three – Education for Learning to Live Together

Chapter Four – Guidelines for Teaching-Learning Materials and Sample Lesson Plans

- Peace
- Human Rights
- Democracy

- Sustainable Development

Chapter Five – The State of the Practice of Values Education in Teacher Education: Country Reports
Appendices

- Suggested Readings
- Declaration and Integrated Framework of Action on Education for Peace, Human Rights and Democracy (Geneva 1994)
- Declaration of Principles on Tolerance
- Plan of Action to Follow-up the United Nations Year for Tolerance (1995)
- Yamoussoukro Declaration on Peace in the Minds of Men
- Selected Papers
- Directory of Participants of APNIEVE Meetings

School-based enterprises and environmental sustainability*

Arenas, Alberto

In: Journal of Vocational Education Research, 28(2), 2003, p. 107-124

Blacksburg: American Vocational Education Research Association (AVERA), 2003

<http://scholar.lib.vt.edu/ejournals/JVER/v28n2/pdf/v28n2.pdf>

Excerpt from abstract:

This article uses an educational framework of environmental sustainability to examine the production process and the final products and services delivered by School-Based Enterprises (SBEs). Whereas the fledging literature on SBEs has extolled their many benefits for improving learning, it has been slow to acknowledge the importance of promoting ecological awareness through vocational education. This article defends the importance of “greening” SBEs in order to raise students’ and teachers’ consciousness about the importance of environmental stewardship, and it also explores key limitations faced by SBEs that attempt to follow such a framework. This environmental educational framework is used to analyze qualitatively the actual practices of SBEs in two public secondary schools in Colombia, South America.

*Also found under *Case Studies and Best Practice*

Sectoral sustainable development strategies: Self assessment guide

Sustainable Development Commission, UK (2002) [online]

<http://www.sd-commission.gov.uk/pubs/sag/>

Description from website:

The Sustainable Development Commission (SDC) has produced this guide as part of its work with business sectors, the Department of Trade and Industry (DTI) and the Department for Environment, Food and Rural Affairs (DEFRA), to encourage the development of sectoral strategies for sustainable development. This work has been taken forward through the Pioneers Group, a network of interested sectoral organisations.

The aim of the guide is to improve the quality and accountability of sectoral sustainable development strategies. It provides a quality assurance framework which sectors can use to assess the quality of their draft sustainable development strategies. It can also be used as a reference document for those preparing strategies, to ensure that their strategy will ultimately meet the standards established by the Sustainable Development Commission.

Skills to last: Broadly transferable sustainable development skills for the Canadian workforce: A technical research report for Human Resources Development Canada Human Resources Partnerships

Chinien, Chris

Winnipeg: National Centre for Workforce Development, 2003, 67 p.

<http://www.unevoc.unesco.org/sustainable/docweb/SkillsToLast.pdf>

Description from website:

This study was conducted in two phases. In Phase I, we conducted an extensive review of literature and research to identify knowledge, skills and attitudes (KSAs) related to the three elements encapsulated in sustainable development, namely: Environment, Society and Economy. In Phase II, we validated these KSAs using a focus group of individuals (N=23) representing Canadian diversity, and with expertise in environment, sustainable development and workforce development. The experts confirmed that the great majority of the

KSAs were relevant to the goals of sustainable development. They provided some concrete suggestions for consolidating the KSAs and for collapsing the KSAs under unifying themes in order to capture their interconnectedness and interdependencies. The experts also recommended the use of action focused statements in the formulation of KSA statements. Six major themes emerged from the analysis of the KSAs. These are:

- Ethics and Values
- Integrated Decision-Making
- Responsible Use of Resources
- Valuing Diversity
- Safety and Well-being
- Continual Improvement

The experts who participated in the focus group were invited to comment on these categories by e-mail. All those who responded supported the use of these skill clusters for organizing the KSAs. The core KSAs from the environment, society and economic categories were analyzed and classified under these five unifying clusters. The Sustainable Development Skills Profile (SDSP) was generated as a result of this analysis process. This SDSP consists of a set of broadly transferable skills for the Canadian workforce, regardless of job function, sector, and level of education and training. It is also broadly applicable to general education, adult education, and the technical and vocational education and training.

Sustainable development education: Business education

Thomas, June

In: Broadcast, No. 46, June 1999, p. 13

Stirling: Scottish Further Education Unit, 1999

ISSN 1471-7735

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=24520514>

Description from website:

The author presents a brief account of a survey conducted by the Forum for the Future's 'HE21 project' to assess the current status of sustainable development within higher education business schools and to look at business educators' views on appropriate sustainability learning. She discusses the implications of the findings that not one institution had specified a learning agenda for sustainability relevant to all students and hardly any had strategic programs in place to implement their policy commitments. The main reasons appear to be lack of time in a crowded curriculum and lack of staff expertise. This contrasts with the call from industry for graduates to be equipped to deal with environmental impact, sustainability concepts and the interdependence of major systems. While this project dealt with higher education, the implications for further education are the same, particularly as the latter sector is more closely linked to vocational education. The author asserts that educational institutions must provide courses and curricula to meet these needs.

Teaching and learning for a sustainable future

UNESCO (2002) [online]

Paris: UNESCO

<http://www.unesco.org/education/tlsf/>

Description from website:

Teaching and Learning for a Sustainable Future is a multimedia teacher education programme published by UNESCO. It contains 100 hours (divided into 25 modules) of professional development for use in pre-service teacher courses as well as the in-service education of teachers, curriculum developers, education policy makers, and authors of educational materials.

UNESCO, and the international community in general, believes that we need to foster – through education – the values, behaviour, and lifestyles required for a sustainable future. Teaching and Learning for a Sustainable Future is rooted in a new vision of education that helps students better understand the world in which they live, addressing the complexity and interconnectedness of problems such as poverty, wasteful consumption, environmental degradation, population, health, conflict and human rights that threaten our future.

Teaching and Learning for a Sustainable Future will enable teachers to plan learning experiences that empower their students to develop and evaluate alternative visions of a sustainable future and to work creatively with others to help bring their visions of a better world into effect. It will also enhance the computer literacy of teachers and build their skills in using multimedia-based resources and strategies in their teaching.

Teaching and Learning for a Sustainable Future is available in two multimedia formats – a CDROM and an Internet programme.

Using work-based learning to develop education for sustainability: A proposal*

Coll, Richard K.; Taylor, Neil; Nathan, Subhashni (2003)

*For full description, please see *Policy Debate*

Youth input to global knowledge partnership DOTforce report

Willard, Terri

Winnipeg: International Institute for Sustainable Development, 2001, 42 p.

http://www.iisd.org/pdf/2001/networks_youth_dotforce.pdf

Description from IISD website:

From January-February 2000, the Global Knowledge Youth Advisory Council facilitated an e-conference on “Youth: Building Knowledge Societies.” This event brought together more than 350 participants, primarily young people between the ages of 15-30 from developing countries, to explore how youth are using Information and Communication Technologies (ICTs) in the production, dissemination and use of knowledge for sustainable development. The final report from the Youth Advisory Council was submitted to the Global Knowledge Partnership (GKP) to inform the selection of priorities for its Action Plan. Upon request of the GKP, IISD reconvened the Youth Advisory Council in April 2001 to undertake a follow-up study on significant initiatives in their regions. This study seeks provide guidance to the G-8 Digital Opportunities Taskforce on how to design ICT initiatives that provide the greatest benefit to young people around the world.

SUSTAINABLE LIVELIHOODS

Education for rural development: Towards new policy responses

Atchoarena, David; Gasperini, Lavinia (eds.)

Paris: UNESCO, 2003, 412 p.

ISBN 9 280 31220 0

<http://upo.unesco.org/bookdetails.asp?id=4140#>

Description from website:

The strategy of focusing policies of education for rural development on the expansion of agricultural education at the secondary and higher levels is now viewed as largely obsolete. To meet the challenges facing the rural world today, an integrated view of education is required, centred on access to quality basic education for all. The goals of food security, poverty reduction and meeting the needs of the rural labour market require that rural development policies give priority to basic education and strategies that fully recognize the special nature of the rural environment.

With a view to advancing this line of thought and drawing operational lessons from it to guide countries in the reform of their education, training and rural development policies, the Food and Agriculture Organization of the United Nations (FAO) has joined forces with UNESCO's International Institute for Educational Planning (IIEP) to conduct an international study on education and rural development. Resulting from this joint initiative, the first aim of the book is to review the status of the topic from the standpoint of public policies and the conceptual frameworks on which they are based. It will also attempt to shed light on what may be called 'good practice'.

Ikpe Udok vocational education project

Sustainable Development Network Limited (2003) [online]

Brislington: Sustainable Development Network Limited

<http://www.sdnetwork.kabissa.org/udokvocational.htm>

Description from website:

The project, which is a natural extension of the Ikpe Udok Rural Education Project, aims to provide access to Basic Vocational Skills for the educationally and vocationally disadvantaged people of Ikpe Udok and neighbouring communities in Akwa Ibom State of Nigeria.

The main aims of this project include:

- Providing those with no means to vocational training with (a) means to their chosen apprenticeship training, (b) equipment and tools to set up workshop after apprenticeship (c) business skills training and mentoring to set up and run their vocational business properly (d) tutorials and encouragement to take recognised vocational certificate exams such as City & Guilds.
- Providing career counselling for those trying to choose vocational training course.
- Linking the people with possible sponsors for apprenticeship costs and exam fees.
- Linking artisans (especially) creative artists with appropriate markets. As a start, SDN is currently discussing with "eShopAfrica" to promote arts and crafts from our local artisans to international markets via eShop Africa's website. Same opportunity is being explored with the Bristol Indigenous People Support.

Is technical/vocational training alone sufficient for small enterprise start-up?: Practical experiences from the Informal Sector Training and Resources Network (ISTARN) programme in Zimbabwe

Billing, K.; Chitiyo, P.; Kuchocha, G.; Mutiwanyuka, C.

In: International Vocational Education and Training Association (IVETA), IVETA Annual conference 2001: improving vocational education and training systems, IVETA 2001 Jamaica: Improving VET Systems, Montego Bay, Jamaica, July 31-August 2, 2001

Kingston: International Vocational Education and Training Association, 2001, 42 p.

<http://iveta.itweb.org/>

Description from VOCED website:

The theme for this year's conference was 'Vocational education and training systems, what works and why' and the program was structured around four topics: VET systems; VET in developing countries; VET and economic and social development; and VET and special needs groups. This paper was part of the second

topic. Zimbabwe has not experienced significant growth in formal employment and the informal sector has become a major source for sustainable livelihoods. ISTARN [Informal Sector Training and Resources Network] has developed a short-duration, serially provided training program for unemployed persons prepared to attach themselves to informal sector businesses - adding value to the traditionally occurring 'apprenticeship' system. Over the last five years ISTARN has also provided a small business advisory program, support to informal sector business associations in bulk input supply, start-up equipment loans to training program graduates, and marketing support and linkage programs for micro and small enterprises (MSEs). A more business-like, cost recoverable and local service provider development approach has now been introduced in order to make the program more sustainable. Based on a series of post-training tracer studies of both formal institutions and its own Traditional Apprenticeship Programme (TAP) graduates, along with more recent impact monitoring initiatives, this paper attempts to highlight the importance of a broad-based, multi-component and multi-stakeholder approach to livelihood-orientated technical and vocational training. In addition, experience to date clearly indicates the need for a rigid adherence to sustainability considerations based on the development of training and business services providers with the minimum of donor subsidies, which only cause market distortions.

The new frontiers of education*

Carneiro, Roberto

In: Learning throughout life: challenges for the twenty-first century, Conference on Learning Throughout Life Lisbon, 1999

Paris: UNESCO Publishing, 2002, p. 63-71

ISBN 9 231 03812 5

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=46162884>

<http://upo.unesco.org/bookdetails.asp?id=3888>

Description from VOCED website:

This paper outlines the new frontiers of education and highlights three trends that provide the context for educational development in the 21st century. They are: the interplay between globalisation and the search for roots; the quest for social cohesion, inclusion and increased democracy; and the transition from inequitable economic growth to sustainable human development. The author says that the future of education runs parallel to the circumstances of humankind: education systems mirror the contradictions of the societies they serve.

Knowledge, a core concept of societies, is constantly changing, and education and training strategies will need to adapt to new knowledge patterns. Four ways of knowing are outlined – know what; know why; know how; and know who – and a new learning triangle links academic, vocational and experiential learning. Learning throughout life is classified into three main categories: personal and cultural development; social and community development; and professional development and sustainable employability. The paper concludes with the following propositions: study-time entitlement after compulsory schooling; teachers at the centre of learning opportunities; and a dual system of learning.

*Also found under *Policy Debate*

Sustainable agriculture, training course*

The Warmonderhof Training Centre (2002)

*For full description, please see *Employment in the Sustainable Development Context*

THE TRIPLE BOTTOM LINE

Economic Sustainability

Embracing change: reengineering VET for triple bottom line and developing sustainable learning regions for the future

Plane, Karen

In: The sixth Australian VET Research Association conference: the changing face of VET, Australian Vocational Education and Training Research Association Conference: 6th, Sydney, 2003

Nowra: AVETRA, 2003, 11 p.

http://www.avetra.org.au/abstracts_and_papers_2003/K.Plane.pdf

Description from VOCED website:

The theme of this paper is regional ecology and issues for vocational education and training (VET) in developing learning partners with small business for sustainable economic development while protecting the natural capital of a growing, complex, diverse region. However there are questions about the capacity of a market driven culture of VET for building learning communities as well as about the direction for the new national strategy in embracing the triple bottom line (the social, the economic and the environmental) for developing public private partnerships for learning communities with a sustainable future. The regional ecology of the Adelaide Hills region of South Australia is discussed and the absence of a role for VET is noted.

Ethiopia: Sustainable development and poverty reduction program

Federal Democratic Republic of Ethiopia (FDRE): Ministry of Finance and Economic Development (MOFED) (2002) [online]

Addis Ababa: FDRE

<http://www.reliefweb.int/w/rwb/nsf/0/a594ee1853fac46085256c4e0059e429?OpenDocument>

full-text: <http://www.imf.org/External/NP/prsp/2002/eth/01/073102.pdf>

Excerpt from executive summary and body-text:

For some countries, economic growth is the primary policy goal, and poverty reduction is to be achieved through measures complementary to growth. This is not the approach of the Ethiopian government. Poverty reduction is the core objective of the Ethiopian government. Economic growth is the principal, but not the only, means to this objective.

With regard to TVET, the program target for TVET institutions is to enroll 130,000 students (or equivalently 55,000 annual intakes) by the end of the program period (2004/05), along with significant measures to enhance quality of education and management of TVET institutions.

Powering the community: The future of local and regional development

Kildare, Tony

In: Western Australia Department of Training, Working visions international employment futures conference 2001, Working Visions International Employment Futures Conference, Perth, WA, 2001

East Perth: Western Australia Department of Training, 2001, 10 p.

http://www.training.wa.gov.au/sub-sites/WV/papers_framset.html

Description from VOCED website:

This paper discusses Regional Development Agencies in the United Kingdom (UK), and in particular, the East Midlands Agency. The aim of such agencies is to develop a collaborative approach to promote sustainable economic development within the region. This is brought about by getting everyone in the region, stakeholders, partners and funders, behind the regional economic strategy. Examples are given of how the East Midlands Development Agency (EMDA) has done this.

Transition, reconstruction and stability in South-Eastern Europe: The role of vocational education and training

Birzea, Cesar; Grootings, Peter; Pantelev, Tzako; Schmidt, Carsten; Taseva, Marija
In: European Training Foundation, Transition, reconstruction and stability in South-Eastern Europe: the role of vocational education and training
Turin: European Training Foundation (ETF), 1999, p. 5-26
<http://www.etf.eu.int/etfweb.nsf/pages/etfindex>

Description from VOCED website:

This report presents the results of work undertaken by a group of experts at the request of the European Training Foundation in preparation for the Sofia conference. It provides a framework for policy makers to indicate how investments in vocational education and training (VET) can help to reach the targets of the Stability Pact, namely democratisation and economic development. This paper stresses that there is a need for a global and long-term policy that would take into account the investment in human capital at least as important as the investment in the physical capital. The aim of this joint project is to ensure sustainable development that would bring South-Eastern Europe economic prosperity, peace, democratic life and social cohesion. The authors emphasise that setting up this regional project must start from the following principles: the promotion of a market-centred approach; the development of a culture of peace and democratic citizenship; and the treatment of education and training as a high priority.

Vocational and technical training: An IDB strategy

de Moura Castro, Claudio (ed.)
Washington: Inter-American Development Bank, 2000
<http://www.iadb.org/sds/doc/EDU-116E.pdf>

Excerpt from foreword:

This strategy establishes guidelines for Bank support of vocational training programs, both as stand-alone activities and as part of other projects. The word training is quite broad and often ambiguous. In this report, it is used to refer to the preparation of workers and technicians for activities in the manufacturing, agriculture and service sectors.

Contents:

- Economic Development and Training
- Training in Latin America and the Caribbean: A Brief Overview
- Traditional and New Lines of IDB Support
- Policies that Yield Results
- How to Improve Training
- Guidelines for the IDB
- Bibliography
- Annexes

Vocational education and training in Tanzania and Zimbabwe in the context of economic reform

Bennell, Paul; Bendera, Shane; Kanyenze, Godfrey; Kimambo, Emrode; Kiwia, Sixtus; Mbiriyakura, Tichafa; Mukyanuzi, Faustin; Munetsi, N.; Muzulu, Jo; Parsalaw, Willy; Temu, John
In: Education Research, No. 28, 116 p.
London: Department for International Development, 1999
ISBN 1 861 92061 X
<http://www.dfid.gov.uk/education/Research/Library/contents/dif07e/begin.htm>

Description from VOCED website:

This report suggests that sustainable development in Sub-Saharan Africa (SSA) will depend upon major improvements in basic education, and technical and managerial skills in every sector of the economy, as well as labour productivity in tradable goods and service sectors. However, the funding and provision of vocational education and training (VET) is as yet uncertain and this situation is aggravated by the lack of detailed, empirical research on VET in Africa. This report examines the provision of VET in Tanzania and Zimbabwe since the mid-1980s. The Tanzanian research was funded by the Education Division of the Dept for International Development (DfID) and the Zimbabwe study was supported by DfID's Economic and Social Committee for Research (ESCOR). The research aimed to investigate the full range of factors, including adjustment and stabilisation policies, that influenced VET provision over this period of time. The study examined how governments in Tanzania and Zimbabwe had addressed insufficient VET provision and facilitated the skill formation required for sustainable economic growth. It identified the main outcomes and effects of government policy reforms and other initiatives, and the underlying reasons, and specified the

policy requirements to enhance future outcomes. The research project examined all types of post-secondary VET provision including technical colleges, polytechnics, pre-employment occupation training for secondary school leavers, and work-related training for the employed. Each country study involved a review of formal VET provision in the public and private sectors, and surveys of VET policies and practices in the two key industries of manufacturing and tourism. Chapter 1 provides introductory information and Chapters 2 to 6 summarise the key findings of the surveys, presenting the main results for each country in turn. Chapter 7 discusses possible VET reforms aimed at major weaknesses in VET provision. Some of these are common to both countries and others are country specific.

Vocational education and training policy and sustainability*

Mulqueeny, Jitka (1998)

*For full description, please see *Social Sustainability*

Year book Australia: 2003: Number 85*

Trewin, Dennis

Canberra: Australian Bureau of Statistics (ABS), 2003, 974 p.

ISSN 0312-4746

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=47548785>

Description from website:

This annual publication provides a comprehensive statistical overview of the economic and social conditions in Australia. The major theme in this issue is the environment, focusing on sustainable development. Other subjects covered include government, international relations, population, labour, income and welfare, industry, science and innovation and education and training. A number of special articles are also included.

The chapter on education and training (p. 295-332) contains: Commonwealth and state government responsibilities in education; Expenditure on education; Government assistance to students; Financial assistance: from the students' perspective; Preschool students; Primary and secondary education; Vocational education and training; Higher education; Adult and community education; Indigenous education and training; Participation in education and training; Educational attainment; Bibliography. Special articles included in this section are: Work-related training; Full-fee paying overseas students.

*Also found under *Environmental Sustainability*

Environmental Sustainability

Adult environmental education: Awareness and environmental action*

UNESCO (1997)

*For full description, please see *Lifelong Learning*

Conserving our energy: Building for the future

Harrowell, Don

In: Training Agenda, Vol. 8, No. 2, May 2000, p. 5

Sydney: NSW Dept of Education and Training, 2000

ISSN 1038-3891

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=29764767>

Description from website:

This article is part of a feature called 'Training for a sustainable future'. It looks at how TAFE NSW has contributed to training in the area of energy conservation, in collaboration with the NSW Government's Sustainable Energy Development Authority (SEDA).

Environmental management system – A way to develop vocational skills*

Vaasa Vocational Adult Education Centre (2002)

*For full description, please see *Stewardship: Influencing Attitudes, Awareness, Behaviours and Lifestyles*

Ethic of sustainability for work education

Dippo, Don

In: *Journal of Vocational Education Research*, Vol. 23, No. 4, 1998, p. 325-338

Athens: American Vocational Education Research Association, 1998

ISSN 0739-3369

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=20887906>

Description from website:

In this paper the author introduces the environmental concept of sustainability and examines how the idea can be used by vocational educators to reconceptualise their work to include ethical as well as economic imperatives. The paper begins with a brief overview of the origins of sustainability education (education for sustainable development) and some impressions of what the concept of sustainability has to offer vocational education. The next section uses the concept of sustainability to examine the current approach to vocational guidance and career development materials.

Increasing vocational awareness through an 'Environmental Impacts of Business and Industry' module

Horner, Jonathan

In: *Journal of Geography in Higher Education*, Vol. 22, No. 1, March 1998, p. 120-125

Carfax Publishing – Part of the Taylor and Francis Group

ISSN 0309-8265 (Print)

ISSN 1466-1845 (Online)

<http://taylorandfrancis.metapress.com/app/home/contribution.asp?wasp=gaf8jb4vll4rvhenyd9l&referrer=parent&backto=searcharticlesresults,1,5>

Description from website:

The initiative described in this paper is an undergraduate module called Environmental Impacts of Business and Industry. It has been taught at Roehampton Institute London since 1994. Its aims include increasing student awareness of the workplace, developing understanding of how environmental policies interact with working practices and equipping students with skills for investigating and reporting employment-related environmental issues. Students conduct an environmental assessment of a site-specific business or industry and produce a 3000 word case study report which identifies environmental impacts and makes recommendations for improving environmental performance. The paper first describes the departmental/institutional context and the development of the module. It then considers the structure and content of the module and the selection of case studies –illustrating them by reference to some of the lecturing material and work produced by the students.

Productivism, sustainable development and vocational education and training

Anderson, Damon (2002)

*For full description, please see *Policy Debate*

Technical and vocational education in China: History, educational system and achievements, opportunities and challenges*

Rongguang, Dai (2001)

*For full description, please see *Lifelong Learning*

Year book Australia: 2003: Number 85*

Trewin, Dennis (2003)

*For full description, please see *Economic Sustainability*

Social Sustainability

Access to vocational guidance for people at risk of social exclusion

Clayton, Pamela (ed.)

Glasgow: Department of Adult and Continuing Education, University of Glasgow, 1999

ISBN 0 863 89072 5

<http://www.leeds.ac.uk/educol/documents/000000943.htm>

Contents:

- Acknowledgements
- The research team
- Executive summary
- List of acronyms used

Chapter One: Introduction, by Pamela Clayton

Chapter Two: Access to vocational guidance in Italy

Chapter Three: Access to vocational guidance in Ireland

Chapter Four: Access to vocational guidance in the United Kingdom

Chapter Five: Access to vocational guidance in Finland

Chapter Six: Access to Vocational Guidance in the Czech Republic

Chapter Seven: Conclusions

Human resource development in Europe: At the crossroads

Nyhan, Barry

In: Descy, Pascaline; Tessaring, Manfred (eds.), Training in Europe: second report on vocational training research in Europe 2000, background report, Vol 2, 2001, p. 233-248

Luxembourg: Office for Official Publications of the European Communities, 2001

ISBN 9 289 60035 7 / 9 289 60034 9 (v. 1-3)

ISSN 1608-7089

<http://www2.trainingvillage.gr/etv/research/background.asp>

Description from website:

This paper examines the concept and practice of human resource development (HRD) from a European perspective. It locates HRD, which is seen to refer specifically to learning, training and development activities, within the context of underlying people management theories (human resource management HRM) or what can be termed as 'industrial or working life cultures'. The paper contrasts two theories of HRD derived from different ways of conceiving human resource management. The one that has more in common with classical European industrial values is the humanistic-developmental tradition. The competing model, which it is argued is growing in prominence in Europe, is the instrumental utilitarian way of looking at human resources. The paper concludes that Europe is at the crossroads at the moment in its search for a signpost leading it to human resource management practices that are socially sustainable.

Vocational education and training policy and sustainability*

Mulqueeny, Jitka

In: McIntyre, John; Barrett, Mary (eds.), VET research: influencing policy and practice: proceedings of the first national conference of the Australian Vocational Education and Training Research Association, Sydney, February 1998, p. 334-339

Sydney: Australian Vocational Education and Training Research Organisation, 1998

ISBN 0 958 61880 1

<http://www.voced.edu.au/cgi-bin/get-iso8.pl?off=20346711>

Description from website:

In this paper it is argued that the assumptions underlying economic, social and vocational education and training (VET) policy must be re-examined so that policies producing long-term sustainable social and economic development may be facilitated. The discussion explores and challenges the premises on which the Australian VET system are based. It is suggested that policymakers only recognise the importance of work that contributes to economic growth and governments therefore support education and training that reflects this assumption. The implications are raised for economic sustainability and the development of socially stable societies in the future. The concept of futures research is examined followed by a discussion of its role in providing a means of examining the existing foundations of VET policy and identifying the consequences of choosing various alternative policies. *Also found under *Economic Sustainability*

APPENDIX: RESEARCH SOURCES

Conferences:

AVETRA Conference Archives

<http://www.avetra.org.au/publications/archives.shtml>

CONFINTEA V: Adult learning and the challenges of the 21st century

<http://www.unesco.org/education/ue/confintea/booklets.html>

Envisioning practice – implementing change, International Conference on Post-compulsory Education and Training

http://www.australianacademicpress.com.au/Publications/conference_proceedings/Envisioning_practice/epiccover.htm

Fourth International Conference 'Vocational Education and Training Research'

<http://brs.leeds.ac.uk/~beiwww/BEIA/jvet2001.htm>

Integrating Lifelong Learning Perspectives, International Conference on Lifelong Learning

<http://www.unesco.org/education/ue/publications/uiestud36.shtml>

IVETA 2001 Conference

<http://www.iveta.itweb.org/>

Linking Work, Skills and Knowledge: Learning for Survival and Growth

<http://www.workandskills.ch/downloads/ConferenceReportWS.pdf>

Scottish Educational Research Association Annual Conference

<http://www.leeds.ac.uk/educol/beia.htm>

Second International Conference on Researching Work and Learning

<http://www.ucalgary.ca/cted/confer2001/>

Second International Congress on Technical and Vocational Education

<http://www.unesco.org/education/educprog/tve/nseoul/indexe.html>

The sixth Australian VET Research Association Conference

http://www.avetra.org.au/Conference_Archives/2003/abstracts.shtml

Vision to Action – TVET Planning and Real Results for the 21st Century, UNESCO International Programme for Technical and Vocational Education and Training. Regional Conference

<http://www.ait.tafe.sa.edu.au/unevoc/2001conf/>

Working Visions International Employment Futures Conference

<http://www.training.wa.gov.au/sub-sites/WV/background.html>

Databases:

Australian Bureau of Statistics

<http://www.abs.gov.au/>

Clearinghouse on Adult, Career, and Vocational Education (ACVE)

<http://www.cete.org/acve/index.asp>

Education-Line

<http://brs.leeds.ac.uk/~beiwww/beid.html>

VOCED

<http://www.voced.edu.au>

Departments, Councils, Commissions:

Advisory Committee on Business and the Environment

<http://www.defra.gov.uk/environment/acbe/default.htm>

Council for Environmental Education

www.cee.org.uk

Department for Education, Science and Training (DEST), Australia

<http://www.dest.gov.au/>

International Cleaner Production Cooperative

<http://es.epa.gov/cooperative/international/>

New Zealand Business Council for Sustainable Development

<http://www.nzbcSD.org.nz/>

Sustainable Development Commission

<http://www.sd-commission.gov.uk>

Trade Union Sustainable Development Advisory Committee

<http://www.defra.gov.uk/environment/tusdac/>

World Business Council for Sustainable Development

<http://www.wbcSD.org/templates/TemplateWBCSD5/layout.asp?MenuID=1>

Journals:

Adult education and development

<http://www.iiz-dvv.de/englisch/Publikationen/erwachsenenbildung.htm>

American Educational Research Journal

<http://www.aera.net/pubs/aerj/>

Community College Review

http://www.findarticles.com/cf_0/m0HCZ/mag.jhtml

Indian Journal of Training and Development

<http://www.istddiploma.org/ijtd.asp>

Journal of Cleaner Production

http://www.elsevier.com/wps/find/journaldescription.cws_home/30440/description#description

Journal of Geography in Higher Education
<http://www.tandf.co.uk/journals/titles/03098265.asp>

Journal of Vocational Education and Training
<http://www.triangle.co.uk/vae/>

Journal of Vocational Education Research
<http://scholar.lib.vt.edu/ejournals/JVER/>

Religious Education
<http://www.tandf.co.uk/journals/titles/00344087.asp>

SFEU – *Broadcast*
<http://www.sfeu.ac.uk/information.asp?pageID=4.6>

Taylor and Francis Journals
<http://taylorandfrancis.metapress.com/app/home/main.asp?wasp=92xd8tgb7pdyynfc1wul>

Training Agenda Journal
<http://www.kdc.com.au/training.htm>

Newsletters / Bulletins:

UNESCO-UNEVOC Bulletin
<http://www.unevoc.unesco.org/bulletin/index.htm>

Organisations:

Bundesinstitut für Berufsbildung (BIBB)
<http://www.bibb.de/>

Development Education Association
www.dea.org.uk

Development Studies Network
<http://devnet.anu.edu.au/>

European Foundation for the Improvement of Living and Working Conditions
<http://www.eurofound.eu.int/>
<http://www.eurofound.ie/themes/sustainability/sdonline.html>

Food and Agriculture Organization of the United Nations
<http://www.fao.org/>

Inter-American Development Bank
<http://www.iadb.org/>

International Institute for Educational Planning
<http://www.unesco.org/iiep/>

International Institute for Sustainable Development

<http://www.iisd.org/>

<http://www.iisd.org/measure/compendium/>

Learning and Skills Development Agency

<http://www.lsd.org.uk/home.asp>

Mediterranean Information Office for Environment, Culture, and Sustainable Development

<http://www.mio-ecsde.org/index2.html>

National Institute of Adult Continuing Education

<http://www.niace.org.uk/>

Sustainable Development Network Limited

<http://www.sdnetwork.kabissa.org/>

Sustainability Education Center

<http://www.sustainabilityed.org/>

The Center for the Study of Expertise in Teaching and Learning

<http://www.csetl.org/>

The Sustainability Education Center

<http://www.sustainabilityed.org/>

UNESCO

<http://www.unesco.org>

UNESCO-UNEVOC

<http://www.unevoc.unesco.org/>

UNEVOC Canada

<http://www.umanitoba.ca/unevoc/>

UNEVOC International Centre for Technical and Vocational Education and Training

<http://www.unevoc.unesco.org/bonn/index.htm>

United Nations Decade on Education for Sustainable Development

<http://portal.unesco.org/education/desd>

United Nations: Sustainable Development

<http://www.un.org/issues/m-susdev.asp>

<http://www.un.org/esa/sustdev/documents/agenda21/>

Websites:

Environmental Practice at Work

<http://www.epaw.co.uk/>

National Strategies for Sustainable Development

<http://www.nssd.net>

Qualifications and Curriculum Authority

<http://www.qca.org.uk/>

Education for Sustainable Development

<http://www.nc.uk.net/esd/index.htm>

Sustainable Development Online

<http://sd-online.ewindows.eu.org>

Sustainable Development Research Centre

<http://www.sustainableresearch.com/index.html>

Teaching and learning for a sustainable future

<http://www.unesco.org/education/tlsf/>

Teachernet

<http://www.teachernet.gov.uk/>

SD Action Plan for Education and Skills

<http://www.teachernet.gov.uk/wholeschool/sd/actionplan/>

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