

# Greening TVET curriculum and skills - Teacher Mentoring and Peer Learning Programme (TMPLP)

hosted by the Education University Hong Kong – a UNEVOC Centre  
17-20 June 2017, Hong Kong, S.A.R.

## Background

The process of greening TVET institutions invites those involved in training and learning to engage in a whole-institution approach which seeks to develop knowledge, skills and attitudes that can lead to more sustainable practices in the community, the workplace and other settings where knowledge and skills could be applied. It can also lead to obtaining professional qualifications or proofs of learning that reflect environment-friendly skills. As an approach, the greening of TVET stimulates development of enabling capacities that make people active members of green economies, sustainable and climate-resilient societies, and enable them to pursue lifelong and decent work.

Integrating sustainability in the curriculum and training is at the heart of the institutional greening process. TVET is concerned with providing a reservoir of skills for enterprises that deal with processes, technologies, material flows and their environmental consequences. This role is made more prominent in light of countries aspirations to transition into green economies and societies. The greening of economies is causing unprecedented shifts in skills requirements. These changes include shifts in the ways in which jobs are performed (which lead to a need to retrain and upskill displaced workers so they can be employed in other sectors); the emergence of new skilled occupations (for which individuals need to be trained and acquire qualifications); and the greening of existing jobs (which also demands upskilling of those employed) (Strietska-Iliina et al., 2011).

The economic and employment value of the greening process is high. However, this is only complementary to the social aspects that the greening process must seek to promote in TVET to develop graduates who can be active contributors to the development of an inclusive, competitive, equitable and responsible society.

In the context of UNESCO-UNEVOC's advocacy to consider institutional approaches to greening TVET, the greening of curriculum and training is a strategic step. 'Greening' the mind is facilitated through identifying the short-term skill needs and the changes over time that will prepare students to play a role in a dynamic and greening economy. Correspondingly, it entails adapting relevant contents and training so that knowledge and skills are imparted that satisfy the needs of current structures, technologies and

job tasks in the labour market. It also involves ensuring that the process and outcomes of training are evidence of the acquisition of practical skills that can be used to perform jobs in a more sustainable manner or introduce new concepts for the greening of occupations.

In every discipline, there is an opportunity to contribute to a basic understanding of sustainability and its importance for the future. The role of TVET teachers, trainers, instructors, as well as other catalysts of learning in a range of education and training sites, is critical to be addressed especially that TVET is constrained in the aspects of quality and labour market relevance. These issues are triggered by the lack of appropriate TVET teacher training institutions in many countries, weak pedagogical/didactical capacities of teachers and needs for professional development to update their knowledge and competencies.

A teacher mentoring and peer learning approach is thus considered of additional value to help teachers in TVET reflect on their practice and develop a network of support system that can guide their journey to integrating sustainability skills in the curriculum and training. In collaboration with the Education University of Hong Kong, which hosts the UNEVOC Centre under the Department of International Education and Lifelong Learning, the programme taps into the expertise of the UNEVOC Centre in this field. EdUHK is a higher education institution focused on teacher education and the professional development of educators and trainers. The Institute is developing its profile to include Professional and Vocational Education - focusing on TVET teacher and trainer education and research into TVET.

### Objectives and outcomes

In its mode, the programme will be a pilot run targetting TVET teachers and managers from different countries in Asia-Pacific region. It has the broad aim to understand better the needs and the current framework of practice of TVET teachers and managers in TVET institutions in the UNEVOC Network to anticipate the conditions for successful implementation and integration of green skills in the curriculum.

Specifically, it seeks:

- (i) To provide TVET Teachers/Trainers/Instructors an opportunity to reflect on their existing practice and increase capacities for effectively applying “greening” concept, knowledge and skills in TVET curriculum; and
- (ii) To sensitize the awareness of TVET teacher educators/ TVET managers on the skills gaps in VET-related occupations and the measures to address them through curriculum and teacher development approach.
- (iii) To create an opportunity for forming a network of TVET teachers integrating green skills in their TVET practice across the UNEVOC network.

At the end of the programme, the participants will be better informed of the economic, social and environmental rationale for integrating green skills in the policies and practice. TVET teachers will also be equipped with the tools and a learning network of TVET teachers, to help them increasingly reflect the knowledge and skills gained in their practice and share their lessons learned and classroom approaches. UNEVOC will have a better overview of the conditions for successful implementation of green skills in the curriculum and training and consider these new insights into designing a robust teacher mentoring and peer learning support.

As a whole, the experience could provide platform to encourage more TVET teachers to expand the scope of their application in their respective subject or trades.

## Participation

The programme targets individuals engaged in professional work as a TVET Teacher / Trainer / Instructor/Manager in a VET field who can potentially learn from, and create opportunities to multiply, a range of experiences in integrating green skills in the curriculum and adapting pedagogical approaches in green skills development in TVET.

## Events

- The programme will also be held in conjunction with the VPET Connex International Conference 2017 (Partnership, Innovation, Enterprise) where participants of the TVET-TMPLP would be able to join selected sessions on 17 June at the Hong Kong Convention and Exhibition Centre.
- A half-day study visit to several campuses of the Hong Kong Institute of Vocational Education will provide an opportunity to learn practical examples of greening curriculum applications.

<b>17 June 2017, Saturday (DAY 0)</b>		
<i>Time</i>	<i>Programme</i>	<i>Remarks</i>
07:30	Depart Hotel / Arrive at venue (Hong Kong Convention and Exhibition Centre)	c/o Christy
08:00-09:00	Registration for VTC Congress/ World Skills	
09:00-09:35	<b>VTC Congress Plenary</b>	
09:35-10:40	<b>VTC Congress Plenary</b>	
10:40-11:10	Coffee break/ Networking	
11:10-11:40	<b>Guided Tour – World Skills competition; conference sessions</b>	Hall 5BC Hall 5E
12:40-14:30	Lunch	
14:45-16:00	<b>VTC Congress - Conference sessions</b>	
16.00 – 17.00	Coffee break/ Networking	
17:00-20:00	Dinner	TST
21	Shuttle bus to the hotel	

## Workshop Programme

18 June 2017, Sunday (DAY 1)		
Time	Programme	Remarks
08:30-09:00	Depart Hotel / Arrive at The EdUHK Campus, B3-P-12 (08:30-18:30)	c/o Ken
09:00-09:15	Welcome & Introduction to the Programme <i>(Objectives, UNESCO Global Action programme on ESD, Participants' introduction and expectations)</i>	Ken Barrientos/
09:15-09:30	Introduction to the programme modules	Margarita Pavlova
09:30-18:00	<p><b>Module 1: Green skills within the Greening TVET context and existing practices</b></p> <p><b>Learning objectives:</b> To reflect on understanding of greening TVET and skills and existing practices;</p> <p><b>Expected outcome:</b> A shared understanding of greening TVET and skills and implementation practices</p> <p><b>Main facilitator: Margarita Pavlova</b></p>	
09:30-10:15	Opening and Keynote lecture: Greening TVET as a holistic approach to implementing ESD  Group exercise / Q&A	Shyamal Majumdar
10:15-10:30	Coffee /Tea Break	
10:30-11:00	<b>Module 1a-</b> Understanding 'green skills' typology: its many uses and purpose for TVET	M Pavlova
11:00-11:30	<b>Module 1b-</b> Greening the curriculum- how to develop green competency and skills in TVET planning and design	Helen Knibb
11:30-12:30	<b>Group activity 1: Pair and Share</b>	Participants

	<p>Country experiences sharing on greening curriculum.</p> <p>Looking at the specific examples from participants at how green competencies and skills are identified and adapted in the curriculum.</p> <p><b>Grouping:</b></p> <p><b><i>Fiji-Malaysia- Hong Kong</i></b></p> <p><b><i>Cambodia-Sri Lanka- Hong Kong</i></b></p> <p><b><i>Malaysia-Canada – Mongolia- Hong Kong</i></b></p> <p><b><i>EdUHK – Colombo Plan College- Hong Kong</i></b></p> <p><b>Output:</b> Better understanding of specific ways how curriculum can get greener</p>	Moderated by: M Pavlova / H Knibb
12:30-13:30	Lunch	
13:30-14:00	<b>Module 1c-</b> Greening the curriculum- how to teach and assess green skills and competencies	Helen Knibb
13:30-14:30	<p><b>Group activity 2: Pair and Share</b></p> <p>Country experiences sharing on how green skills are taught and assessed. Looking at the specific examples from participants.</p> <p><b>Output:</b> Better understanding of specific ways how green skills can be taught and assessed.</p>	Participants Moderated by: H Knibb
14:30-15:00	<b>Module 1d-</b> Greening the curriculum – seven content training modules for green skills integration	M Pavlova
15:00-15:15	Coffee / Tea break	
15.15-16.00	<p><b>Practical activity: Discuss suggested modules, provide modifications</b></p> <p><b>Output:</b> a set of modules</p>	Participants Moderated by M Pavlova
16.00 – 16.30	<b>Module 1e -</b> Content training module: Increasing awareness of the links between environment and economy	Participants Moderated by M. Pavlova
16.30-17.30	<b>Practical activity:</b>	M Pavlova

	<p><b>From the content module on increasing awareness of the links between environment and economy</b></p> <p>Analyzing of environmental legislation and industry applications</p> <p>Analyzing of environmental impacts from industry operations</p> <p><b>Output:</b> Ability to design a training module on increasing awareness of the links between environment and economy</p>	
17:30-17:45	Day 1 wrap up; assignment of MILY speaker for Day 2	K Barrientos
18.30	Dinner	Shatin

<b>19 June 2017, Monday (DAY 2)</b>		
<b>Time</b>	<b>Programme</b>	<b>Remarks</b>
09:00-09:20	Sharing of Reflections by participants from Day 2: hotel lobby	Ken, Participants
9.20 – 9.50	Depart Hotel / Arrival at training venue (Council Chamber, Block A-4/F, EdUHK)	c/o Christy
09:50-10:00	Short Introduction and welcome by the EduHK President	
10:00-17:30	<p><b>Module 2: Learning from the local context: Greening TVET in Hong Kong</b></p> <p><i>Learning objectives: To share good practices and challenges in greening TVET in Hong Kong and other country approaches.</i></p> <p><i>Expected outcome: An understanding of the different institutional and economic context's influencing the greening of TVET curriculum.</i></p> <p><b>Main facilitator: Sothy Yok (tc)</b></p>	
10:00-10:30	MILY	Participant selected from Day 1
10:30-11:00	<b>Module 2a-</b> Green module curriculum at Higher Diploma Level – a VTC experience	Dr. Jackson C.K. LAU, Head of the Environmental Office, VTC

11:00-11:30	<b>Module 2b-</b> Greening of industry (private sector): Towngas Commitment in Fighting Against Global Warming	Victor Kwong, Chairman of Environmental Working Committee, Towngas
11:30-12:15	<b>Module 2c</b> - Greening the training curriculum for meeting the skills demand in the renewable energy field  Q&A	RENAC (via Skype)  <i>Katie Brown or Berthold Braid</i>
12:15-12:45	<b>Module 2d-</b> Greening of occupations: what greening of skills means in the chemical sector in South Africa  Q&A	Wits University (via Skype)  <i>Presha Ramswarup</i>
12:45-13:00	<b>Reflections:</b>  1.How Hong Kong and other country examples can inspire skills development that meet the changes in the labor market  -scope for TVET teachers to reflect teaching contents based on the needs in the industry  -the competency needs of teachers  (Moderator will provide key questions to ponder and  2. Stimulate participants to prepare their reflections for next day's discussion)	S Majumdar
	Day 2 morning wrap up;  assignment of MILY speaker for Day 3	
13:00-13:30	Lunch (take-away)	
13:30-17:30	<b>Study Visit to VTC Hong Kong</b>  <i>Learning objectives:</i> To observe the ways greening activities are organized in practice  <i>Expected outcome:</i> An understanding of practical implementation achievements and challenges  (See separate programme)	
18.00	<b>Dinner</b>	Shatin

20 June 2017, Tuesday (DAY 3)		
09:00-09:20	Sharing of Reflections by participants from Day 2: hotel lobby	Ken, Participants
09:20-09:50	Depart Hotel / Arrival at training venue (Library Mini Theatre, EduHK, 09:30-17:30)	c/o Tracy Lau
09:50-10:00	Most Important Learning of Yesterday (MILY)	Participant selected from Day 2
10:00-18:00	<p><b>Module 3: Designing institutional and classroom strategies for implementation.</b></p> <p><b>Learning objectives:</b> Facilitate participants in designing classroom strategies through planning learning activities and improving training environments and applying practical approaches in day-to-day practice.</p> <p><b>Expected outcome:</b> Based on the participants' existing curriculum (theoretical and practical) and workshop inputs design classroom and institutional strategies for greening.</p> <p><b>Main Facilitator: Shyamal Majumdar</b></p>	
10:00-10:40	<p><b>Module 3a-</b> Implementation of an integrated approach to greening TVET with support from the teaching community network</p> <p><i>Discussion on the needs, gaps and opportunities based on</i></p> <ul style="list-style-type: none"> <li>• <i>Whole-institution -environment conducive for local institution mentoring scheme</i></li> <li>• <i>Curriculum content development; training standards development- scope for teachers/trainers transferring the knowledge to curriculum developers?</i></li> <li>• <i>Pedagogical elements- what needs to be strengthened?</i></li> <li>• <i>Resource and partnership elements-what needs to be augmented?</i></li> <li>• <i>Assessment elements- what assessment indicators can be learned from the approaches in practice?</i></li> </ul> <p>Output: A set of strategic recommendations</p>	Shyamal Majumdar / Ken Barrientos
10:40-11:00	<b>Module 3b-</b> Greening TVET – Canadian experience in	Helen Knibb



	teacher professional development	
11:00-13:30	<b>Module 3c-</b> Global reporting framework – to understand the industry: How to develop an action plan	Eric Tsang, The EdUHK
13:30-14:30	Lunch	
14:30-15:00	<b>Module 3d-</b> Content training module: Concept for making a workplace greener	Margarita Pavlova, Christy Chen
15:00-16:30	<p><b>Practical Activity:</b></p> <p><b>Form the Content Training Module</b></p> <ul style="list-style-type: none"> <li>• <i>principles of closed loop economy and life cycle analysis</i></li> <li>• <i>engaging students in developing sustainable solutions and green enterprise concept;</i></li> </ul> <p><b>Output:</b> Ability to design a training module on making a workplace greener</p>	
16.30 – 17.00	Coffee/ Tea break	
17:00-17:30	Sharing of outputs	Participants
17:30-18:30	Wrap up and Next steps	UNEVOC
	Certification	EdUHK
19.30	Dinner	TST
21 or 22.15	Shuttle bus to the hotel	

## Resources

Participants are requested to carry with them some materials used in their teaching for use during some activities and a laptop to activities.

Handouts will be given to the participants during training sessions

UNESCO-UNEVOC (2017). Greening technical and vocational education and training – a practical guide for institutions (to be sent as attachment)

Colleges and Institutes Canada (2016). Green skills for sustainable economic growth.  
<https://www.collegesinstitutes.ca/file/green-skills-for-sustainable-economic-growth/>

UNESCO Roadmap for implementing the Global Action Programme on ESD  
<http://unesdoc.unesco.org/images/0023/002305/230514e.pdf>