

**Margarita Pavlova** (The Education University of Hong Kong, Hong Kong SAR), **Yuk Kwan Ricky Ng** (Vocational Training Council, Hong Kong, SAR), **Shakil Rehman Sheikh** (Air University, Pakistan), & **Mahyuddin Arsat** (Universiti Teknologi Malaysia, Malaysia)

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## **TVET@Asia Issue 14: Preparing TVET Personnel to Achieve Sustainable Development Goals - Objectives, Concepts, and Experiences**

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Sustainable development goals (SDGs) cannot be achieved without human resource development (HRD) combined with capacity building for communities. The *2030 Agenda for Sustainable Development*, adopted by United Nations members in 2015, highlights the need for protection, peace and prosperity for all ‘actants’ on the planet. It calls for an end to poverty and all deprivations by developing sustainable strategies to ensure food, shelter, financial independence, health, education and freedom are available to all. However, these goals cannot be achieved without preserving the planet's eco-systems and mitigating for climate change. Technical and Vocational Education and Training (TVET), both formal and non-formal, is one of the key vehicles for supporting HRD for the purposes of individual and collective well-being. From this perspective, TVET can become a catalyst for the social and economic transformation of communities and economies for the purposes of achieving SDGs targets.

TVET's focus on traditional economic principles and industrial modernisation does not necessarily support the type of economic development required for achieving SDGs, therefore the focus should be revised in order to bring TVET in Asia in line with the UN's SD agenda. To this end the quality of TVET, in all its multifaceted manifestations, should be a priority for governments in the region as well as worldwide.

In this context a strong national policy directed at transforming TVET systems for the purpose of equipping learners with core competencies required for these changes (e.g. green skills, critical and systematic thinking skills) is imperative. Of course there will be challenges encountered in the process. These relate to: the rapid technological transformations that will be required for SD across all sectors; strengthening the environmental industry sector, as well as implementing other economic and social changes in order to reshape existing redundant skills; the introduction of new programs; and closer collaboration with industry combined with large-scale capacity building for TVET personnel.

These challenges can be addressed at different levels, such as:

- policy formulation,
- regulatory mechanisms, such as national qualification frameworks, the standardisation of curriculum and requirements for TVET teachers’ profiles and qualifications,
- the institutional, and
- the personal.

Although governments and regulatory frameworks are fundamental for the transformation of the TVET system, TVET institutions and TVET practitioners themselves can also become active change agents for the realization of SDGs. They can become actively involved in establishing strong networks with industries and communities, for example. They can also integrate pressing global issues such as climate change, loss of biodiversity, sustainable consumption, as well as measures for greening industries and incorporating green technologies into their curriculum.

Personnel involved in all four of the levels of TVET systems stated above are arguably the most important influencers who contribute to the quality of TVET and its proactive pursuit of SDGs. Issue 14 of *TVET@Asia* addresses the challenges associated with capacity building across TVET systems to ensure the effective implementation of SDGs. The issue focuses on examining the objectives, concepts and experiences involved in preparing TVET personnel for change. Articles collected in this issue analyze different aspects of TVET teacher education and training that are directly related to the need to address issues associated with sustainable development in terms of education that contributes to SDGs. Recommendations and advice proposed by the authors, based on their research, can be used by policymakers and practitioners to design evidence-based initial and in-service educational programs for TVET teachers.

**Margarita Pavlova and Christy Chen Shimin** argue for the need to develop the capacity of TVET educators so they are able to reorient existing educational programs in TVET for the purposes of advancing the attainment of sustainable development goals (SDGs). Their article considers how TVET educators respond to the reorientation of the curriculum towards Education for Sustainable Development (ESD) by including generic green skills in a green module that was delivered by one TVET institute in Hong Kong. They put forward a work-based learning model for the professional development of TVET teachers that encourages them to learn with researchers and students together. The model can be adjusted to meet the needs of different types of teachers and it has the potential to enhance teachers' capacity to implement green modules that will support students' generic green skills development.

**Liu Huan and Martin Hartmann** examine the role of TVET institutions in China specifically in relation to achieving SDGs. In particular, the authors focus on the factors that influence the need to develop students' competencies for SD in terms of the teaching and learning processes in TVET. Based on identified barriers and the demand for equipping students with key competencies for sustainability, practical advice and recommendations are offered for teachers to enhance their relevant competencies such as instructional competency, hands-on competency, competency to plan, competency to act in concrete domains, competency to analyze and reflect on the teaching and learning process, and others.

**Rechell Lam and Ricky Yuk-kwan Ng** highlight the importance of 'learn to unlearn' and 'unlearn to learn' as a promising solution for the capacity building of TVET personnel in the context of the rapid changing technologies in industries, particularly within the context of SD. This article discusses the sustainability needs for the curriculum, learning and teaching

practices, pedagogies and the importance of TVET teachers' continuing professional development (CPD).

**Beatriz Matafora** focuses specifically on equal access for the vulnerable to all levels of education and vocational training, including persons with disabilities as one of the Sustainable Development Goals for 2030. Her article examines inclusive measures in place in the TVET system in North Rhine-Westphalia, Germany as well as challenges for TVET teachers associated with change. She also discusses recent research projects that analyze the attitudes and thoughts towards inclusion among TVET teachers and the skills TVET teachers require for inclusivity in vocational schools. The article also puts forward some directions for future research.

The article by **Rong Kang and Margarita Pavlova** focuses on the ways TVET teachers can be motivated to incorporate the knowledge and skills relevant to their own specializations, and those that are required for education for sustainable development (ESD), into their classroom/workshop practice. The article argues that career identity theories provide the principles that can be used to design teacher education and training programs to cultivate teachers' motivation and commitment to ESD. The authors put forward a model that consists of six components that can be included in educational programs for TVET teachers with the specific aim of establishing ESD in TVET.

*The Editors of Issue 14*

*Margarita Pavlova, Yuk Kwan Ricky Ng, Shakil Rehman Sheikh, Mahyuddin Arsat*

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