Virtual conference on innovation in TVET

Virtual conference on the UNESCO-UNEVOC TV*e*T Forum from 25 February to 01 March 2019
Moderated by Jan Peter G. de Otero

Introduction

UNESCO-UNEVOC's 2018 Global Learning Forum on 'Managing skills in a time of disruption' put a spotlight on the factors shaping the future of the technical and vocational education and training (TVET) landscape, including changes in climate, demography, business and labour markets, technology, and migration. The transition to a green economy, the implementation of digital technologies in the world of work and the emergence of new forms of entrepreneurship are not only changing the profile of jobs but also creating new possibilities for generating solutions for social and economic problems in the form of innovations. On the one hand, this scenario is driving TVET systems to improve their capacity to identify the future demand of skills (e.g. soft and specific technical skills – including digital, greening and entrepreneurial skills) and to expand access to these skills. On the other hand, TVET systems are also leading the way to innovation development by incorporating new activities (e.g. the development of applied research, business incubators, and intellectual property activities), with aims to enhance local innovation capacity and to create greater social and economic impacts.

In all, these changes represent a great challenge for the future of TVET, but at the same time also expresses a need to seize the prospects and enhance the social and economic benefits from TVET in different regions of the world.

Discussions at UNESCO-UNEVOC's Learning Forum underlined that new and radical shifts are needed to ensure that TVET systems can respond to these changes and that TVET systems can no longer just operate according to a 'business-as-usual' model. The speed and scale of change call for a broad process of transformation, with TVET institutions increasingly acting as drivers of innovation in their local eco-system, and in parallel innovating the learning processes and products offered to youth and adults and increasing citizens' potential to innovate.

As TVET adapts itself to the impacts of significant social, environmental and economic disruptions, innovative practices emerge with great potential to rejuvenate the future of TVET. Current developments in TVET suggest that many types of innovative practices are already being developed or deployed, significantly changing the way we define and practice TVET. However, despite the international appreciation of the important role innovative practices can play to transform TVET, there is a need to better understand what is meant by innovation in the TVET sector and its implications.

For this reason, this virtual conference aims to discuss different ways through which innovation contributes to the development of TVET. The virtual conference looks to present and debate the different roles of TVET in systems of innovation, the different use of innovations to improve the quality of TVET, as well as the main barriers for innovation in TVET.

Structure and intended outcomes

At the end of this virtual conference, participants will be able to:

- Describe different types of innovation and recognize potential positive and negative impacts of innovations in the economy and society;
- Recognize innovation in TVET from four dimensions: products and services, processes, organizational practice, and external relations;
- Appreciate the internal and external perspectives of innovation in TVET;
- Identify the different roles of TVET in processes of innovation development;
- Understand different uses of innovations in ICTs and TVET management in the improvement of the quality of TVET;
- Understand the main barriers to innovation in TVET.

Monday, 25 February	Thread 1	What is innovation in TVET? Why is innovation in TVET important?
Tuesday, 26 February	Thread 2	What are the roles of TVET systems in the local and national dynamics of innovation development?
Wednesday, 27 February	Thread 3	How can innovations in ICT help to improve the quality of TVET?
Thursday, 28 February	Thread 4	How can innovations in TVET management help to improve the quality of TVET?
Friday, 1 March	Thread 5	What are the main barriers to innovation in TVET?

Topics and leading questions

Thread 1: What is innovation in TVET? Why is innovation in TVET important?

In this thread, we aim to discuss how different TVET systems, networks and schools define the idea of innovation in TVET. The focus is on discussing the different perspectives and rationales that support the development of innovative practices in TVET. In particular, this thread explores innovation in TVET from four perspectives:

- products and services offered to students/clients (e.g. new TVET courses and programmes)
- processes (e.g. new pedagogic practices, the introduction of new teaching or pedagogical equipment and technologies)
- organizational practice (e.g. changes in strategic planning, financing, human resources management)
- external relations with important stakeholders (e.g. new partnership with companies, development of external consultancy)

Additionally, the thread will present an initial framework to analyse the importance of innovation in TVET from an internal perspective (processes and organizational practices), and from an external perspective (products and services, and external relations with important stakeholders). Through this framework the thread will discuss that TVET can assume different roles in the local and regional dynamics of innovation development.

Leading questions:

This topic discusses what is understood by innovation in TVET and why it is important to address. Specifically, the topic asks participants:

- How 'innovation in TVET' can be defined?
- Why are TVET systems, networks and schools developing an innovation agenda?

Thread 2: The roles of TVET systems in local and national dynamics of innovation development – an external perspective

This thread will present different roles of TVET in processes of innovation development using a national and regional system approach. This approach on innovation (Freeman, 1988; Lundvall, 1992) suggests that the collective learning between several actors and institutions is the base of the interactive and simultaneous processes of generation, acquisition, and dissemination of innovation. Participants will discuss how innovations in TVET products and services, as well as innovation in external relationship with important stakeholders, can help to strengthen the development of local and national systems of innovation.

According to Edquist (2011), there are some key activities that should be deployed within a system of innovation, such as provision of knowledge inputs, competence building, formation of new product markets, networking through markets and other mechanisms, incubating activities, financing of innovation processes and provision of consultancy services of relevance for innovation processes. This thread will look to build on this understanding by considering the role of TVET in systems of innovation in not only competence building (educating and training the labour force for innovation and R&D activities), but also in other activities related to knowledge generation and technology diffusion.

Leading questions:

- What are the different roles that TVET can assume within a system of innovation?
- What kind of activities can or should TVET deploy in order to facilitate the development of innovation in their regions?

Topic 3: Using innovations in ICT to improve the quality of TVET – an internal perspective

The third thread will discuss innovation in educational processes. This type of innovation in TVET can be defined as the innovative combinations of specific teaching and learning approaches and techniques that aim at improving learning effectiveness. It involves mainly classroom practices (i.e. teaching and learning) that are also often the most difficult practices of education to change.

The topic will focus on the use of ICTs in TVET as a type of innovation in TVET processes. According to Saud et al. (2011), "the world of work is in continuous change as ICT itself, thus posing more challenges to the workers in the 21st century and the institutions responsible for their preparation". Innovations in the use of ICT in TVET can be seen as a tool for increasing access to TVET, and enhancing the effectiveness and quality of the education provided TVET sector. The development and integration of ICTs into TVET have been facilitated in previous years because ICT tools are becoming more accessible and interactive.

The topic also aims to present different examples of the use of ICT in TVET. The participants will also have the chance to present and discuss their stories related to developing or implementing innovative practices related to ICTs in TVET.

Leading questions:

- How can ICTs help to improve the quality of TVET?
- How are different systems, networks, and schools implementing innovative practices linked to ICTs in TVET?

Thread 4: Using innovations in TVET management to improve the quality of TVET – an internal perspective

This thread will discuss innovation in organizational practices. Organizational innovation in TVET can be defined as the group of changing activities deployed by TVET systems, networks and school related to internal administration and management, such as strategic planning, workplace organization, and human resource management.

The topic will focus on two different types of innovation in organizational practices, namely innovation in TVET management practices and innovations in human resource management. While the first type of innovation in TVET refers to strategic planning, institutional objectives, and strategies, innovation in human resource management refers to new teacher-training requirements and programmes.

This thread will present different examples of innovation in TVET strategy and leadership, and human resource management. The participants will have the chance to present and discuss their stories related to developing and implementing innovative practices related to TVET management.

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Leading questions:

- How can innovations in TVET management improve the quality of TVET?
- How are different systems, networks, and schools implementing innovative TVET management practices?

Topic 5: What are the main barriers to innovation in TVET?

The last topic discusses the constraints that TVET systems, networks and schools are facing while developing and implementing innovative projects and initiatives. The topic will provide a framework to analyse some of the common barriers to innovation. According to Hadjimanolis (2003, p. 561), barriers to innovation can also be described from internal and external perspectives. The internal perspective focuses on people, strategy and structure related barriers. The external perspective refers to barriers on market, government and other external issues.

While the topic provides a general overview of potential factors that hinder TVET institutions to innovate, participants will also be encouraged to present the barriers to innovation in TVET from their own perspective.

Leading questions:

- What are the main barriers for innovation in TVET?
- How are different systems, networks, and schools facing the challenges related to the development and implementation of innovation in TVET?

About the moderator

Jan Peter G. de Otero is an experienced adult and vocational education specialist, with a relevant professional background working as a project manager in the National Service of Commercial Apprenticeship in Brazil. The moderator possesses a master's degree in education by the Pontifical Catholic University of Rio de Janeiro, as well as a certification on Education Quality from the Organization of American States. In the last years, Jan Peter is conducting his Ph.D. research on the integration of TVET in systems of innovation at the University of Osnabrück, financed by the German Academic Exchange Service (DAAD). Since 2018, Jan Peter is working as a consultant and conducting a trends mapping study on innovation in TVET for UNESCO-UNEVOC.

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