ICT and TVET development

Dr. Md. Nurul Islam
Director
Bureau of Manpower Employment and Training

Technological advancements and innovation is the critical contextual factor in driving development pof TVET over the past decade. In the recent time, the nature and use of ICT has changed dramatically, bringing many and far-reaching impacts and new external demands on TVETsystems. In the formal sector, there was a massive increase in ICT use in a largevariety of existing occupations, as well as an expansion of new occupationsin the ICT sector. For example small-scale farmers have new opportunities toaccess market information through mobile phones, and this could profoundlyshape their decisions on what to produce, and where and when to sell theirproduce, potentially making a significant impact on poverty reduction. Inurban informal economies, ICT is a source of new job opportunities in areassuch as mobile phone unblocking and cable television installation, whilevehicle mechanics are increasingly required to deal with the computerizationof vehicle systems.TVET is responding to the diverse ICT needs of learners, whether these arerelated to work, education or citizenship. New courses have been introducedto address occupational changes in the ICT job market, while many TVETproviders have shifted provision towards a blended approach, with significantlymore self-directed and/or distance learning. In developed countries, new ICTapproaches have been introduced to modernize TVET organizations and tomanage their administration and finance, including learner records.

TVET institutions have been expected to introduce ICT instruction into theircurriculum in response to the market demand for workers with these skills.Inevitably, the ICT content of many jobs has been transformed. For smallscalefarmers, there are opportunities to access market information throughmobile technologies that can inform important decisions concerning whereand when to sell their produce, potentially making a significant impact ontheir livelihoods and future prospects. In urban informal economies, ICTs are asource of new job opportunities in areas such as mobile phone unblocking andcable television installation, while vehicle mechanics are increasingly requiredto deal with the computerization of vehicle systems. In the formal sector,there has been a massive increase in ICT use in a large variety of existingoccupations, as well as an increase in new occupations in the ICT sector.TVET institutions were also called on to integrate ICT into school operationsinvolving instruction and management. Some regions and countries were notready for this despite having made policy commitments to increase ICT usein TVET.

The use of ICT provided opportunities for expanding access to TVET for manylearners across a wide range of countries. E-learning grew in importance, andmany countries and schools are now offering studies and qualifications online. Forms of blended learning, which combineself-directed learning using online content with support from ‘live’ lessons,are growing. It can be

difficult for the policy community to keep up to datewith ICT's evolving potential, and the capacity to evaluate the costs andbenefits.

Technologies are advancing very fast in the present world. The progress of technology is experiencedby the fruits of invention. Each phase of development of technology has brought science and technology to new elevations. New technologies spread the knowledge base widens through newand higher learning that fosters the emergence of a workforce with moresophisticated skills. The development of technology has been occurred in different stages in various segments of civilization which includes Water power, Mechanization, Textiles, Use of Steel, Electricity and Electronics, Chemicals, Engines, Digital networks, Renewable energy etc. As the wave of new technologies takes over, it increasingly requires the improved TVET systems and workers.Even though the rate of technological progress indeveloping countries has increased over time, the 'technology gap' betweenrich and poor countries still remains high (World Bank, 2008*b*, p. 5). This gapresults from not only the lack of capacity to develop technology itself, but alsothe lack of the infrastructure and skills required for technology diffusion.

TVEThas an important role to play in technology transmission through its transfer ofknowledge and skills.Technological progress creates the demand for a more knowledgeable andskilled workforce, but also one that can adapt quickly to emerging technologiesin a cycle of continuous learning. These workers must possess a minimum setof competencies in reading comprehension, communications skills, numeracyand trainability.

It is essentialto involve labour market stakeholders in the design and also the deliveryof TVET to ensure a match between supply and demand. Globally, theskills requirements and qualifications demanded for job entry are rising.This reflects a need for not just a more knowledgeable and skilled workforce,but one that can adapt quickly to new emerging technologies in a cycle ofcontinuous learning.