Digitalization and partnership with industry

Innovation and Learning Practice
Bridging Innovation and Learning in TVET (BILT) Project

Submitted by Kenya School of TVET

The onset of the COVID-19 pandemic led to the Kenya School of TVET (KSTVET) becoming a leader in online TVET training. With support from stakeholders and partners, KSTVET created Open Distance and e-Learning (ODeL) satellite centres across Kenya aimed at building capacities of TVET trainers.

KSTVET also established a National ODeL Centre to address issues related to infrastructure, technology, quality assurance and learner engagement/support in the TVET sector. Collaborative efforts by KSTVET and its partners led to the creation of a robust online learning environment which provides accessible lifelong education.

Start date: January 2020
Type of implementing institution: Governmental organization or affiliated
Target group: Pre-service and in-service TVET trainers
Implementation partner: Commonwealth of Learning

Kenya School of TVET

The Kenya School of TVET (KSTVET) is a government institution established with the primary objectives of training technically skilled personnel to teach in technical institutions or to work across all sectors of the economy.

Description of activities

Through the 'Digitalization and partnership programme', KSTVET made TVET education accessible to a wider population – in particular those in remote areas. The programme increased the capacity of TVET trainers through the creation of Open Distance and e-Learning (ODeL) institutions. With support from partners, such as Safaricom (delivering internet access at a subsidized fee) and the Commonwealth of Learning (providing Raspberry PI devices to enable internet connectivity), off-campus students now have greater access to teaching and learning materials.

Relevance

What challenge was the 'Digitalization and partnership with industry' programme designed to address?

The programme was originally designed to overcome obstacles to teaching caused by the COVID-19 pandemic, but was expanded to address challenges faced by marginalized and remote communities in accessing training. Access issues included lack of proximity to physical learning centres, costs associated with learning and equipment and cultural sensitivities.

What strategies did KSTVET employ to address these accessibility issues?

Flexible and blended learning: KSTVET established this approach to allow students access to training via a mix of online teaching together with traditional classroom-based sessions.

Inclusivity in training: By applying the **Universal Design for Learning** principles in e-Learning content development, KSTVET bridged the gap between online learning and inclusivity. E-Learning content is produced in multiple ways (videos, audio and text) to cater for diverse learning needs and the systems have in-built accessibility software which enables students with special needs to navigate content with minimal or no assistance.

Employability skills: KSTVET created a fully digitalized, self-paced, 'employability skills' module – a common unit of competence for students undertaking courses in TVET. Students learn at their own pace with support from online weekly tutorials.

Supportive infrastructure: TVET students can access learning and resources free of charge through KSTVET's **National ODeL platform**, which, through a partnership with Google, can now be accessed on a mobile phone. KSTVET also increased internet bandwidth to all its platforms and developed a state-of-the-art virtual studio for content creation which includes eight 'virtual training booths' with a desktop, wall screen, Wacom interactive teaching board and phone to speak directly to trainers.

Trainer quality: Through its learning platform, KSTVET has also enhanced the quality of its training by providing TVET trainers across the country with free-of-charge courses.

Is the 'Digitalization and partnership with industry' programme part of a wider national education strategy?

Digitalization is one of the flagship projects of the Kenyan government towards accelerating attainment of **Kenya Vision 2030**. Through partnerships with UNESCO, Google, Intel and Huawei, KSTVET is set to further develop the Kenyan Tech Pipeline by providing digital skills, such as android application development, to youth and lifelong learners.

Added value

What is new about your initiative and how does it differ from similar initiatives in Kenya?

Not only was KSTVET the first TVET institution in Kenya to start training online, its innovative solutions to accessibility, together with strategic partnerships, make it stand out from other TVET programmes.

For example, the Commonwealth of Learning provided 21 Raspberry Pi devices to mitigate issues with internet access. KSTVET configured the devices with e-Learning content and placed them in areas where remote students live. Students are able to access materials via the devices from their mobile phones using the provided Wi-Fi, an innovation particularly important for those in the informal *jua kali* sector ('work under the hot sun' – a reference to people working without a fixed location such as in the streets).

What positive outcomes have occurred as a result of this initiative?

The number of students enrolling in the TVET course has increased, including in areas with limited or no internet coverage. The programme has expanded digital skills training opportunities relevant to the current job market, therefore increasing online job opportunities for trainees.

A good example of this is Kenya's Ministry of Education partnering with Google to develop an Android developer skills hub that is hosted by KSTVET. The initiative trained 300 TVET trainers in intermediate-level Android application development who then trained 10,000 students in 50 TVET institutions across Kenya.

Transferability

To what extent is the 'Digitalization and partnership with industry' model transferrable and adaptable to other contexts?

KSTVET ODeL is a centre of excellence for Kenya and all online resources are accessible for free to TVET institutions. Partnerships with the Commonwealth of Learning and UNESCO have ensured learning and management resources from the initiative, such as the **National Learning Management System** and the **Open Education Resource Catalogue**, can be easily adopted or replicated in any educational setting. Additionally, all resources are made available in print form to cater for special needs TVET institutions whose students have difficulties accessing online resources.

What advice would you offer to those wishing to replicate this initiative?

Two key recommendations are:

Consider contextual differences
Each community of learning has its own unique social, cultural, economic and educational context. It is therefore necessary to conduct a comprehensive needs assessment and contextual analysis as well as building good working relationships with local stakeholders to gain their support and ensure their active involvement.

Collaborate
Different countries or regions may have varying policies and regulatory frameworks governing TVET. Collaboration with relevant government authorities and stakeholders is vital for navigating this challenge. Similarly, collaborating with relevant international organizations or established TVET institutions is vital for assisting with quality assurance in each new setting.

Has the initiative been promoted in any national or international contexts?

Nationally, the initiative was showcased in Kenya's annual TVET fair which brings together TVET stakeholders, industry players and the general public to learn about and view innovations from TVET institutions. Internationally, the National ODeL Centre received a bronze award for Teacher Professional Development in the World Federation of Colleges and Polytechnics (WFCP) Awards of Excellence 2023.

KSTVET's initiative on 'Digitalization and partnership with industry' is one of the BILT project's Innovation and Learning Practices that address systemic challenges within the five work streams of the project. Specifically, the KSTVET initiative addresses digitalization in TVET.

Digitalization in TVET

Providing response to new skills demands, as technology has permeated the world of work and is changing the profile of jobs.

Additional Innovation and Learning Practices cover the following areas:

 New Qualifications and Competencies

 Entrepreneurship in TVET

 Greening TVET

 Migration and TVET

Contact person:
Edwin Tarno, CEO, Kenya School of TVET,
edwintarno@gmail.com

For more information about this practice:
KSTVET website

About the BILT Project

UNESCO-UNEVOC's Bridging Innovation and Learning in TVET (BILT) project is a reference point for innovation and learning in TVET. It utilizes the international UNEVOC Network to create opportunities for collaboration and a platform for bridging innovation and learning between Europe, Africa and the Asia-Pacific region. BILT complements developments at the national level in supporting innovative, market-oriented and attractive modes of learning and cooperation in TVET.

The BILT project explores the process of identifying, integrating and implementing new qualifications and competencies in TVET. This is known as the 'three I's process'. In addition to the broad focus on new qualifications and competencies, BILT addresses four complementary themes: Digitalization in TVET, Greening TVET, Entrepreneurship in TVET, and Migration and TVET.

For more information, please visit
www.unevoc.unesco.org/bilt

or contact us at
unevoc.bilt@unesco.org

New Qualifications and Competencies in TVET

- **Identifying** new qualifications and competencies in a timely manner;

- **Integrating** them into appealing and flexible curricula and training regulations; and

- **Implementing** them in innovative training approaches.

Entrepreneurship in TVET
Unlocking the potential of innovative entrepreneurial activities and fostering entrepreneurial culture

Greening TVET
Responding to new development paradigms for sustainability and reduced environmental impact

Digitalization in TVET
Providing response to new skills demands, as technology has permeated the world of work and is changing the profile of jobs

Migration and TVET
Accelerating the integration of migrants into their host communities, and allowing them to become productive members of the workforce

---

IMPLEMENTED BY

UNEVOC
unesco
International Centre for Technical and Vocational Education and Training

WITH SUPPORT OF

bibb
Federal Institute for Vocational Education and Training

SPONSORED BY THE

Federal Ministry of Education and Research