



United Nations  
Educational, Scientific and  
Cultural Organization

UNEVOC

International Centre  
for Technical and Vocational  
Education and Training



## The Digital TVET Learning Platform

Promising Practice 2021

## Context

### COVID-19

As a result of the COVID-19 pandemic, the government of Malaysia issued a 'Movement Control Order' to limit interactions and prevent the spread of the deadly virus. This included closing educational institutions to face-to-face learning. Educators became worried about how they were going to continue delivering their course curriculum, and students became anxious about graduating on time.

### TVET's hands-on approach

These restrictions were particularly felt in the technical and vocational education and training (TVET) sector due to its emphasis on practical skills and hands-on training. As such, new norms in teaching and learning practices had to be established.

### Developing a new learning platform

To address this challenge, UTHM developed an online learning platform for TVET courses. Through exposure to the platform, teachers were able to expand their access to open educational resources (OER), strengthen their digital skills and learn how to produce their own digital content.

## Objectives

The ultimate goal of this programme was to enable educators to continue providing quality education to TVET students during the COVID-19 pandemic.

The key objectives were to:

- Enhance teachers' skills and competencies for delivering online and distance learning during the COVID-19 pandemic via the use of digital technology
- Improve the quality of education for TVET students and ensure they were able to graduate on time
- Continue to develop knowledge transfer and exchange channels among beneficiaries



## Overview

**Implemented by:** Universiti Tun Hussein Onn Malaysia

**Where:** Malaysia

**Theme:** COVID-19; distance learning

**Status:** Programme active since October 2020

Universiti Tun Hussein Onn Malaysia (UTHM) is a public university whose primary aim is to produce graduates to meet the demand for highly qualified professionals and technocrats in the field of engineering and technology. The university conducts post-graduate, bachelor and diploma level courses with specializations in 34 different areas.

UTHM's mission statement:

*"UTHM is committed to the generation and dissemination of knowledge, to meet the needs of industry and community, and to nurture creative and innovative human capital."*

## The Digital TVET Learning Platform

This programme was initiated to help TVET teachers and trainers acquire the relevant skills and knowledge needed to deliver online and distance learning, particularly during the COVID-19 pandemic.

A digital learning space – the Digital TVET Learning Platform (DTLP) – was developed and implemented to support these online educational activities. Besides learning how to use the platform, teaching staff mastered the knowledge and skills to develop learning materials for the platform. These included a particular focus on open educational resources (OER), augmented reality (AR) and virtual reality (VR).

TVET programme providers, teachers and students were all trained to adapt to the new norm of using digital content for teaching and learning activities. Teachers were shown how to integrate 2D and 3D virtual components into their lesson plans using AR and VR to simulate real-life problems in classroom and laboratory activities.

Alongside the practical skills, TVET staff were also given training to help them better understand the concept of online and distance learning. Variations of learning materials such as videos, images and textual documents were provided to suit different learning styles, as well as learning activities to support three essential learning domains - cognitive, psychomotor and affective.

Teachers were also taught to work with students to optimize the use of technology as a tool for improving their overall educational experience. One such method involved allowing students to have greater control over their learning by providing them with self-paced modules to accomplish tasks at the speed best suited to their learning style.

UTHM expanded this training to a number of TVET institutions in the region and participants were encouraged to share their newly acquired knowledge with staff at their respective institutions.

## Outcomes and impact

### Meeting participants' needs

One of the strengths of this project was the focus on the specific needs of each group of learners. TVET providers spent time in workshops with subject-matter experts analysing students' needs and developing practical teaching styles and learning materials tailored to them.

### Coaches not lecturers

One such output from the workshops was a pedagogical shift from lecture-style teaching to one that centred on coaching and facilitating self-led learning. Learning materials and the use of the DTLP were designed to enhance this new model by encouraging active learning in a supportive knowledge-sharing environment. Feedback was provided regularly to participants and to boost motivation, rewards were given to participants with outstanding performances in assignments.

### Replication

This initiative was designed in such a way as to make it possible to be replicated by TVET providers at different institutions. The initiative has the potential to become a compulsory programme for TVET providers in the future as facilitators found they benefited from enhanced teaching skills geared towards a more holistic and adaptable teaching style.

### Continued development

Feedback gathered from participants throughout the programme was used to regularly improve and enhance its efficiency and will continue to be used to aid its roll-out at other TVET institutions. This process will ensure learning materials remain relevant and adaptable to changing educational systems.



## Challenges and insights

### Participant motivation and focus

Distance learning can make motivating students a challenge. To combat this, programme facilitators worked with participants to create personal communication plans which took into account their own particular circumstances. Course facilitators also arranged regular tutorial sessions and offered incentives to motivate them further.

### Internet connectivity issues

Using an online platform, especially for live webinars, requires a lot of bandwidth and a stable internet connection, something that cannot always be guaranteed. The materials in this programme, therefore, were created in a way that required minimal internet connectivity and could be downloaded and used offline.

### Digital foundation skills

Not all participants were digitally savvy when the course moved online. Therefore, facilitators had to spend time coaching students on how to use the digital learning platform before they could start the main course programme. The programme created groups using popular mobile communications software, such as WhatsApp and Telegram, to support participants and encourage collaboration. The groups were also a useful way of building relationships between participants, trainers and the programme secretariat, and allowed participants to ask questions and organize coaching sessions.

### Risks of virus attacks and human error

Working on digital platforms always carries a risk of losing data through virus attacks and/or human error. To mitigate this, the programme ensured everything was backed-up on a cloud server and had a contingency plan in place in case of an emergency.

## The future

The DTLP was initially developed for teaching and learning activities during the COVID-19 pandemic. The success of this programme, however, has demonstrated the potential for the DTLP to be used as a sustainable learning ecosystem in the post-pandemic era.

## Learn more

**Affero Ismail**, Head of Department, Global Cooperation, at Universiti Tun Hussein Onn Malaysia, helped to compile this document.

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To learn more about Universiti Tun Hussein Onn Malaysia, a UNEVOC Centre, visit: [www.uthm.edu.my](http://www.uthm.edu.my)

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