Thursday, 20 May 2021
10:00 – 11:30 CEST

Organized as part of the project – Strengthening the Responsiveness, Agility and Resilience of TVET Institutions for the Post-COVID-19 Era

Synthesis report

Introduction

The global shift to distance and online learning in response to COVID-19 has accelerated the need to develop TVET provider-level solutions and share good practices and guidelines on choosing digital services and tools. During the ongoing crisis, digital solutions have become a necessity, offering teachers the means to connect within their organization and with students and social partners. Organization-level digital ecosystems have suddenly flourished and become a lifeline, enabling learning to continue. Yet many teachers are frustrated at the myriad of services and tools and are not comfortable with having to make hasty choices in terms of learning the use of applications while developing new teaching and learning strategies on the go.

For students, the situation can be even more challenging if teachers have not had the time and opportunity to coordinate choices on which digital tools and applications are used to enable and support communication and learning activities. The situation can leave TVET students frustrated, even alienated, and cause retention rates to drop.

Many aspects must be considered when choosing a digital approach: connectivity and device-related limitations, diversity of users and their digital competence, desired pedagogical approaches, readiness and availability of support services, budgetary concerns and possible rules and regulations on storage of data and privacy.

For digitalization to be successful, it is important to understand different perspectives: management, IT support and TVET teachers. What might be the ideal solution from one perspective might not work on an institutional level.

Aims

This webinar was the last in a three-part series looking at the challenges digitalization poses for TVET as part of UNESCO-UNEVOC's COVID-19 response project. The webinar brought together leading experts and interested practitioners from the global TVET community to discuss what a TVET institution should consider and how teachers can be supported through the maze of digital tools, including developing a digital strategy and making decisions on digital services. It discussed the pros and cons of teachers making individual choices on digital tools and whether there is a clash between the perspectives of the IT administrator and the teacher.

Attended by 187 participants from 48 countries, the webinar was organized by OMNIA Education Partnerships of Finland on behalf of UNESCO-UNEVOC. A recording of the webinar is available here.

Key discussion points

Digital tools and future-oriented TVET

Digital tools and services will be an integral part of future-oriented TVET and have the potential to improve its quality, said Jeannette Burmester, Head of the Sector Project on TVET at GIZ in Bonn. She added: "The question is no longer if digital tools and services will become the key tool for TVET, instead it is now how digital tools and services can enhance teaching and learning."

The COVID-19 pandemic has accelerated the uptake of distance and online learning approaches in TVET. Surveys have shown that at least half of TVET providers have made additional resources available for new technologies and/or expanded the use of online and offline distance learning since the start of the pandemic. These range from learning materials distributed via television and mobile communication to more sophisticated tools like online learning platforms, artificial intelligence tools and reporting platforms for assessment and mentoring.

Ms Burmester underlined that many teachers exposed to those technologies for the first time felt overwhelmed by the abundance of choices. Furthermore, many lacked organizational guidance on how to pick and apply them to the needs of their learners.

Navigating the maze of digital tools and services

TVET managers have to consider several factors while choosing from an array of digital tools and services. "While the selection often focuses on investment, utility, connectivity, data security and technology adoption, the decision is sometimes based on costs, rather than the capacity of teachers and learners or other pedagogical sectors," Ms Burmester noted.

Kiam-wee Ang, Deputy CEO at the Institute of Technical Education, Singapore, said appropriate selection of tools was important as teachers will continue to use them after the pandemic is over.

Mr Ang outlined the '4 Rs' of considering tools and services:

•   **Reach** – digital courses reach more parts of the world than physical teaching and can reach students who may not have access otherwise.

- **Richness** – augmented reality, virtual reality, videos and gamification are all possible in the digital world compared to the physical world.
- **Robots** – digital robots such as chat bots and automated bots can do the mundane behind-the-scenes work teachers used to do, including backend work and collecting data.
- **Records** – the richness of the digital environment generates almost limitless data. Digital bots and artificial intelligence can do fast comparisons to identify the students that are learning or not learning well, so teachers can swiftly intervene.

Mr Ang suggested some 'markers' to look for in navigating the maze, referring to the '5 Ss':

- **Security** – has to be the main reason for choosing a system, otherwise no one wants to use it and there is a risk for the users and the institution.
- **Scalability** – many tools are very sophisticated and powerful which makes them expensive if only used by a small group. A highly specialized tool may work for a particular group but it is not scalable to the rest, which would enable the cost per person to come down. Larger providers also provide service and support beyond your organization.
- **Sharing** – rich content takes time and effort to create, so the cost is high if only a small group of users access it. In a system regularly used by different groups or institutions, the package we create can be shared or swapped.
- **Support** – not just technical support within the institution but also from the provider. When a crisis hits, everyone wants help immediately. There are only minutes to solve a problem, so a small provider may not have enough people to provide support in a crisis situation.
- **Sandbox** – a system or subsystem where we can experiment and make mistakes without it affecting or disrupting the main system.

A shared purpose in selecting digital tools

When selecting digital tools, having a shared purpose within the institution is important. Staff should be involved early in selection. If there is a clear common purpose "the staff and organization probably land in a space where they are choosing more or less the same thing because they have common standards and criteria," said Mr Ang.

Esko Lius, Key Expert on Digital Learning at Omnia, Finland, who has been facilitating digital transformation and new pedagogical practices in TVET around the world for a decade, said that when developing digital strategies, there has to be coordination between IT administrators and teaching staff. They should work towards joint objectives on how to get the desired impact and how to collaborate. "Whether we are in IT administration or we are educational staff, we have to keep students at the centre," Mr Luis said.

Natalia Shevchenko-Savlakova, Head of the Centre for International Cooperation in the Republican Institute for Vocational Education, Belarus, said teachers needed to base their choices on training goals and the level of interaction with learners. This could also limit the use of digital-only solutions in TVET institutions. She noted that while there was an undeniable need for IT administration to make decisions, high quality TVET education cannot be achieved exclusively using digitalization. Sometimes it is impossible to replace the practical skills learned from hands-on training.

Support services and best practices

Ms Shevchenko-Savlakova highlighted that her institution was launching a new training programme for specialists in distance learning and will also be carrying out experimental projects at institutions to try

out new technologies including cloud, networking and interactive technologies with a view to disseminating best practices to other educational institutions.

Denis Shemyakin, DigitTutor Instructor at Omnia Education, Finland, presented an overview of the DigiTutor platform. The platform enables TVET students to provide user support to TVET staff to overcome digital challenges while gaining valuable work experience.

Mr Ang noted that companies who receive TVET students for practical training often do not invest heavily in digital training courses. However, after the pandemic started, they found a sudden need for such courses. In addition, companies wanted to upskill their own staff "but they did not have a rich set of training lessons and modules online, so they came to us because we have all of them online. Now we are supporting them in their staff training which previously they did not need us [to do] at all," he explained.

Jens Liebe, Team Leader for Innovation and the Future of TVET at UNESCO-UNEVOC, concluded by saying that while the large and growing number of digital tools and services poses challenges, at the same time, it offers opportunities for better delivery. "Exploring new tools that support collaboration, that best match the purpose of different subject matters and learning goals, is something that will become second nature for teachers in the future," he said.

Stay in touch

UNESCO-UNEVOC International Centre for TVET

unevoc@unesco.org

unevoc.unesco.org

@UNEVOC

@unesco.unevoc.international