New Qualifications and Competencies in TVET

Digital Competencies for the Labour Market

Submitted by **SFIVET, Switzerland**

BILT Innovation and Learning Practice

The ongoing digital transformation of the workplace has a corresponding impact on TVET occupations, qualifications and competencies. This research project investigates the changes occurring on the Swiss labour market arising from digitalization and its effects on vocational education and training. With little evidence for disruptive changes found, results demonstrate however the importance of regularly updating curricula and training regulations, considering new technologies and digital shifts.

- Start date: 01/2017
  End date: 12/2017

- Type of implementing insitution:
  Governmental Organization or affiliated

- Target group:
  Policy makers

Education 2030

Description of activities

This research project investigated the effects of the ongoing digital transformation of the workplace and industry, and how this impacts TVET occupations, qualifications and competencies.

Activities focused on the following areas:

- Conducting quantitative analysis of various labour market data sets

- Completing expert interviews in affected professions

- Hosting a workshop with representatives of five TVET occupations

Little evidence was found for disruptive changes, for example occupations that disappear as a whole or significantly increasing unemployment rates. Instead, there were structural changes within occupations such as impacts on the tasks that are bundled by occupations and the competencies demanded to perform an occupation. Experts observed changing competencies in all the analysed occupations.

Three competence domains were found to be mainly affected by digitalization:

- documentation and administration
- digital technology in the production process
- communication with colleagues and costumers

Additionally, the following competencies were found to rise in importance with digitalization on the labour market:

- Information Technology-affinity

- Data handling and analysis

- Process understanding, networked thinking

- Costumer services and support

- Critical thinking

- Competencies that have an analytical or interactive character

- Competencies that are less routine and less manual

Altogether, the project demonstrated the importance of regular updating curricula and training regulations, which must be adapted to modern digital competencies and requirements of the labour market.

Added value

What current challenges does your initiative address?

The project identified changes in the Swiss labour market, which arise due to shifts in firms' task demands in the context of digital transformation. It illustrates the impact of these changes on industries, occupations, qualifications, and competencies.

Why is this initiative a success?

The project strengthened the understanding of how digitalization and new technologies affect different levels of the labour market via either new products, new production processes, or new ways of distribution, and how this affects TVET occupations and competencies.

What is the added value of this example?

First, the project proposed a quantitative method to identify how the digital transformation affects various levels of the labour market (industries, occupations, tasks, and skills). Second, a one-day workshop showed how newly required, concrete competencies can be identified in five different TVET occupations.

Impact on curricula

What implications does this example have for current or future curricula?

The project highlighted the importance of regular adaption to new technologies and new processes within occupations. Many occupations are not entirely new nor will many occupations disappear completely during the ongoing digital transformation. However, many occupations need to be adapted to new processes and new products. Thus, curricula need to be adapted regularly and this should happen in close collaboration with representatives of the respective occupations to

ensure a close link between curricula and ongoing development in the labour market.

How does this example impact TVET systems?

This research project has implications at the national, or system-wide level.

How does this example respond to industry and social demands?

The focus lays on digital transformation in the labour market with impact on TVET. However, special industry or social demands were not targeted by the project. From this perspective, analysing the impact of digitalization and adapting TVET curricula and programmes accordingly provides the opportunity for students to adopt new skills and learn how to integrate technological changes in the workplace, ultimately contributing to their employability and helping them adapt to workplace changes.

Transferability

Which components of this practice may have practical value to other UNEVOC Centres/TVET institutions?

The workshop conducted within the project with representatives of five TVET occupations can serve as an example of how to ensure a close link between future curricula and ongoing developments on the labour market.

### What challenges do you see if transferred to another context?

The curricula adaption process in Switzerland is strongly standardized and implemented on a regular nation-wide basis throughout all TVET occupations. To bring together all stakeholders in order to ensure a close link between future curricula and labour market needs, in a standardized process and on a regular basis may be challenging, especially in the absence of a national-wide implementation carried by strong TVET institutions.

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- For more information about this practice:
  www.ehb.swiss

  Project results in German, French and Italian:
  www.ehb.swiss/project/entwicklung-kompetenzanforderungen-auf-dem-arbeitsmarkt-digitalisierung

Part of the BILT project involves collecting Innovation and Learning Practices* that address systemic challenges within the five work streams of the project, with the purpose to understand what elements lead to their success and can be transferrable to other contexts.

Access more BILT Innovation and Learning practices in the thematic areas of:
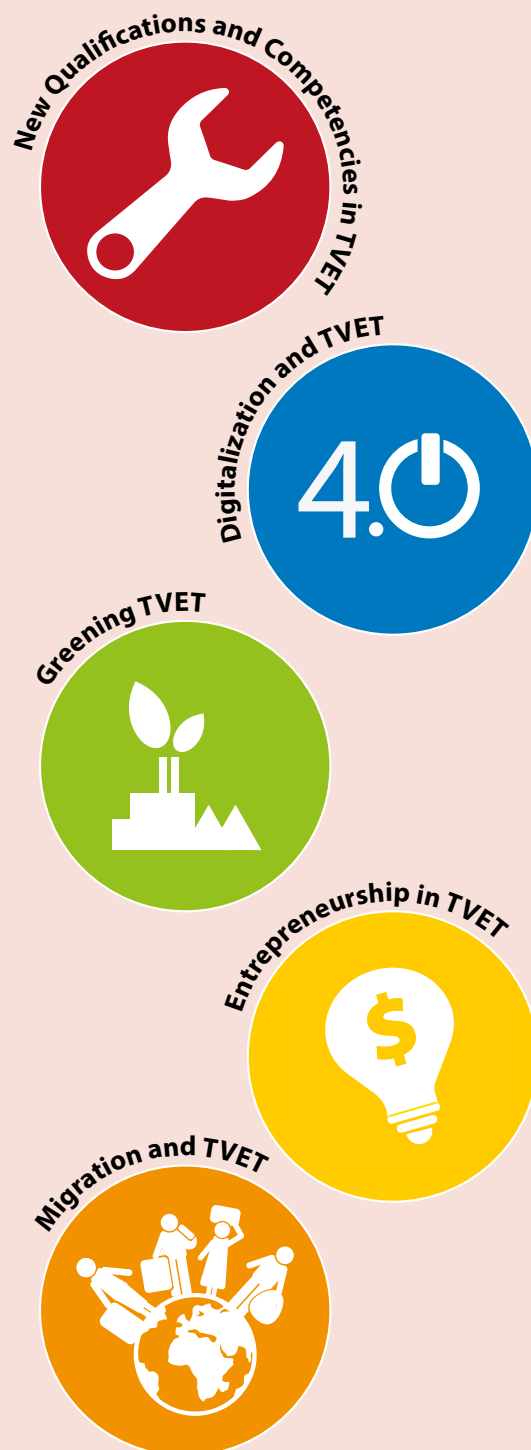
New Qualifications and Competencies in TVET

Digitalization and TVET

4.0

Greening TVET

Entrepreneurship in TVET

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Migration and TVET

BILT
Bridging Innovation and
Learning in TVET

The Bridging Innovation and Learning in TVET (BILT) project provides TVET stakeholders with a platform for exchange and supports them to address current challenges in TVET systems, which arise due to technological, social, environmental, and workplace changes.

Within BILT, the overarching thematic area is New Qualifications and Competencies in TVET, which is supported by four work streams:

- Digitalization and TVET,

- Greening TVET,

- Entrepreneurship in TVET, and

- Migration and TVET.

Through regular knowledge exchange, thematic project activities, and expert working groups, BILT offers opportunities for collaboration between UNEVOC Centres and TVET stakeholders in Europe, and a platform for bridging of innovation and learning between European UNEVOC Centers and TVET stakeholders in the Asia-Pacific and Africa regions.

The results of ongoing activities are accessible on BILT's web page and will be disseminated during a BILT Learning Forum.

The BILT project is carried out in collaboration with UNEVOC Network members, coordinated by UNESCO-UNEVOC with support of the German Federal Institute for Vocational Education and Training (BIBB), and sponsored by the German Federal Ministry of Education and Research (BMBF).

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