



**Virtual conference on New Qualifications
and Competencies in TVET**

Virtual conference report

**UNESCO-UNEVOC TVeT Forum
1–12 June 2020**

This Virtual Conference is one component of the
Bridging Innovation and Learning in TVET (BILT) Project

Virtual conference report

At a glance

To remain relevant for the world of work, modern TVET systems need to adapt to new technologies and structural changes in the labour market and society. A main challenge of TVET is to create modern career paths which attract and integrate youth. With ever-faster innovation cycles, the demand for peer learning is increasing in all regions of the world.

Against this background, the virtual conference on new qualifications and competencies in TVET provided participants the opportunity to discuss how new qualifications and competencies are identified and how do they find their way into TVET practice. The virtual conference was open to all members of the UNESCO-UNEVOC TVeT Forum, an online community with more than 6500 members.

Summary of key reflections

Different TVET systems face similar demands related to digitalization, greening TVET, and entrepreneurship

Participants highlighted a high level of demand in three of the four BILT thematic areas: digitalization, greening TVET, and entrepreneurship. Comparatively, the BILT thematic area of migration was less mentioned by participants as an important area in terms of demands for new qualifications and competencies in TVET.

Minimizing skills mismatches requires a high level of involvement of TVET stakeholders in the process of identification of new qualifications and competencies

TVET systems use two complementary strategies to address the challenge of minimizing skills mismatches: top-down strategy and bottom-up strategy.

TVET systems and providers use different approaches to integrate competencies in TVET curricula and training regulations

TVET systems give a high level of importance to the cross-cutting approach and occupation-specific approach. TVET systems can combine the use of the sectorial and additional approaches to enhance workers adaptability, curricula flexibility and students' choice.

Designing flexible TVET curricula and training regulations requires multi-level governance

Flexibility implies that national curricula provide some key learning outcomes that need to be achieved. Furthermore, TVET providers can decide how to implement national curricula, including training approaches as well as teaching and learning practices.

The implementation of new qualifications and competencies can be better achieved through innovative teaching and learning approaches, practices, and technologies

TVET systems are increasingly attentive for the potentials of blending school-based and work-based learning with virtual and distance learning, especially in the context of the current COVID-19 pandemic.

The delivery of new qualifications and competences requires strong teacher and (in-company) trainer training

TVET teachers' and trainers' roles are changing from being content transmitters to designers of learning spaces, integrating content, activities, resources, and communication.

Background

Globally, technical and vocational education and training (TVET) systems are facing unprecedented challenges, including socio-political issues and trends that are impacting the economy – such as digitalization, sustainable development, and globalization. The current COVID-19 pandemic also reinforces the urgent need for developing TVET qualifications and competencies that are responsive to changing labour markets.

A fundamental concern of policy-makers, TVET practitioners and the private sector is to ensure that TVET systems can provide quality education and training for the current and future world of work. Today's challenges reinforce the need to improve mechanisms to identify and forecast demands for new qualifications and competencies, as well as to modernize TVET curricula and training regulations quickly and effectively. TVET systems must provide attractive learning pathways and lead to future-oriented careers to appeal to young people.

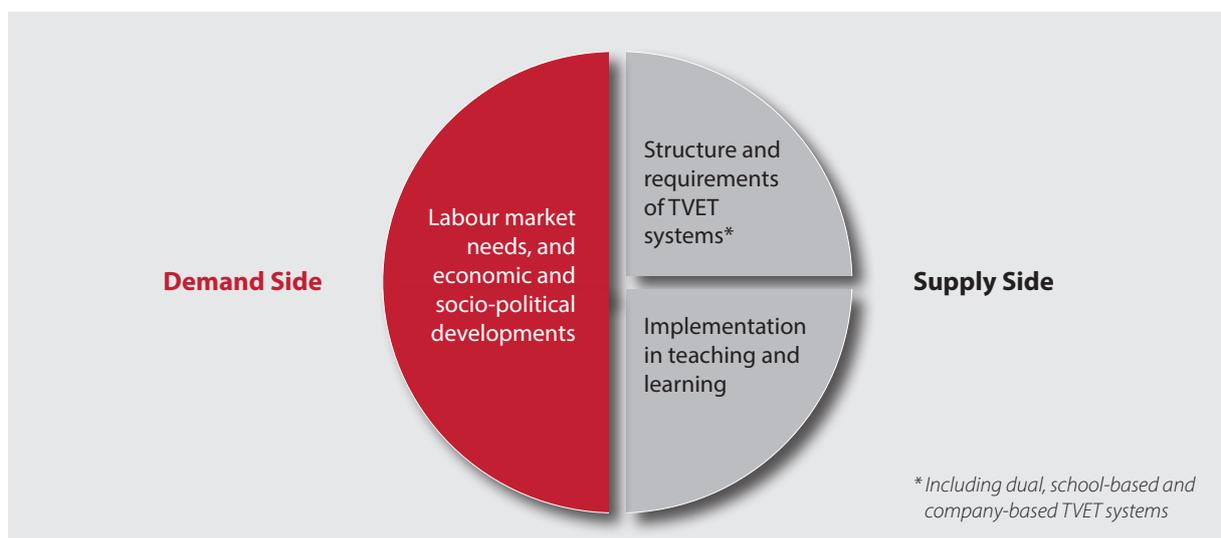
How are new qualifications and competencies identified, and how do they find their way into TVET practice? These are key questions discussed in the framework of the Bridging Innovation and Learning in TVET (BILT) Project. Since 2019, the project has brought together TVET stakeholders to discuss how new qualifications and competencies are shaped and implemented at different levels. The discussions

helped to develop an initial theoretical framework to map these new qualifications and competencies – the New Qualifications and Competencies Ecosystem.

The framework focuses on a demand- and a supply-side:

- On the demand-side, TVET stakeholders create or update new qualifications and competencies based on labour market needs and economic and socio-political developments in an adequate and proactive manner.
- On the supply-side, TVET stakeholders and providers formalize new qualifications and competencies in TVET curricula and training regulations according to TVET systems' structures and requirements. Subsequently, TVET providers deliver new qualifications and competencies in a variety of learning environments such as classrooms, workplaces and online platforms.

Against this background, this virtual conference discussed the identification and implementation of new qualifications and competencies in curricula and training regulations. The outcomes of this virtual conference will also contribute to an ongoing Trends Mapping Study on New Qualifications and Competencies, which will be published in 2020.



Overview

The aim of the BILT virtual conference was to:

- Provide an understanding of the New Qualifications and Competencies Ecosystem framework.
- Present examples of new qualifications and competencies in relevant TVET sectors and occupations in the fields of greening, digitalization, and entrepreneurship, as well as migration.
- Discuss different modes of integrating new qualifications and competencies in TVET curricula and training regulations (cross-cutting, sector-specific, occupation-specific, or additional)
- Identify strategies to improve the responsiveness and flexibility of TVET curricula and training regulations, while respecting national standards
- Discuss different teaching and learning approaches, methods, practices, and technologies, as well as the impacts of new qualifications and competencies for teacher and in-company trainer training
- Present different approaches to individualize learning pathways, and the challenges and the benefits of doing so.

The following topics were opened for discussion during the virtual conference:

THREAD 1:

Introduction to New Qualifications and Competencies in TVET

This thread introduced the processes related to identifying, formalizing, and implementing new qualifications and competencies in TVET. The thread addressed some of the main concepts used to describe phases of curricula and training regulation reform¹:

¹ Adapted from BALL, Stephen (1994). Education Reform: a critical and post-structural approach. Buckingham: Open University Press

- Identification: In this phase, TVET stakeholders highlight their demands and expectations in terms of qualifications and competencies, giving legitimacy for promoting changes in TVET curricula and training regulations.
- Formalization: In this phase, the demands and expectations are validated and formalized, for example in the creation and reform of new occupational profiles, training regulations, and curricula.
- Implementation: In this phase, new qualifications and competencies are implemented in learning environments through teaching and learning processes, and are subject to re-interpretation and adaptation by different actors directly involved in its implementation.

Leading questions:

- Which emerging demands of the society and economy should be reflected by new qualifications and competencies?
- How are new qualifications and competencies identified, formalized and implemented in your TVET system?

THREAD 2:

Understanding the demands for New Qualifications and Competencies in TVET

This thread discussed how new socio-political issues and global trends in labour markets (greening, digitalization, entrepreneurship, and circumstances related to migration) have an impact on the identification of new qualifications and competencies in TVET. Furthermore, the thread also debated how this impacts local TVET providers (schools, companies and other TVET providers).

Leading questions:

- What are the new qualifications and competencies that are most needed in your ecosystem, concerning digitalization, greening, entrepreneurship and migration?

- How are new qualifications and competencies identified in your TVET system?
- Who are the main types of TVET stakeholders involved in the process of identifying the demands for new qualifications and competencies in your TVET system?

THREAD 3:

Integrating New Qualifications and Competencies in TVET curricula and training regulations

This thread discussed the four complementary modes of integrating new qualifications and competencies into TVET curricula and training regulations. Furthermore, the thread debated how TVET systems implement flexible TVET curricula and training regulations, while assuring national standards. Flexibility refers to the capacity of TVET curricula and training regulations to be adapted or complemented - with for example, additional modules - according to the emergence of new skills requirements and demands. The thread provided the opportunity to debate different strategies, challenges, and benefits of achieving greater levels of flexibility.

Leading questions:

- How are TVET curricula and training regulations designed to address new qualifications and competencies in your TVET system?
- Based on the list presented above, what are the main approaches used in your TVET system to integrate competencies into TVET curricula and training regulations?
- What are the different approaches to implement flexible curricula and training regulations in your TVET system?
- What are the benefits and challenges of implementing flexible TVET curricula and training regulations?

THREAD 4:

New teaching and learning approaches and the impacts on teacher and trainer training

This thread discussed the main outcomes of studies and reports concerning the delivery of new qualifications and competencies. The thread was organized around three moments of discussion: first, the thread debated the different types of TVET teaching and learning approaches, practices, methods, and technologies for TVET teaching and learning (TVET schools, companies, etc.).

Leading questions:

- What innovative teaching and learning approaches and practices are being used to deliver new qualifications and competencies in your TVET institution?
- In your opinion, what are the most promising types of technology for TVET teaching and learning? How are they beneficial to TVET learners?

Second, the thread explored how TVET stakeholders are providing individualized learning pathways to students, or in other words, tailored or customized TVET curricula that focus on the experience, learning pace and style of individual learners.

Leading questions:

- Who are the main actors involved in the development of individualized learning pathways in your TVET system? What tasks do they have to perform to successfully implement such pathways?
- How are individualized learning pathways beneficial to learners? What are the challenges of providing individualizing learning pathways?

Third, participants also had the opportunity to discuss the impacts of innovations in TVET teaching and learning in teacher and (in-company) trainer training.

Leading questions:

- What are the impacts of new qualifications and competences for teacher and (in-company) trainer training in your TVET system?
- How can teachers and (in-company) trainers be motivated to integrate new components in teaching and training?
- Considering the current COVID-19 pandemic, how are teachers and trainers prepared to effectively provide distance learning in your TVET system, including not only modern digital tools but also other distance learning technologies such as TV and radio?

In total, 169 members from 48 countries participated actively in the virtual conference, posting a total of 237 messages. This number excludes those that followed the discussions but did not post any commentary.

Key reflections

Demands for new qualifications and competencies are primarily focused on digitalization, greening TVET, and entrepreneurship

The virtual conference asked participants about the current demands for new qualifications and competencies in TVET. Participants presented a great number of demands, demonstrating that TVET systems in different countries can face similar demands related to digitalization, greening TVET, and entrepreneurship.

Concerning digitalization and digital competences, TVET systems are facing demands as a result of increasing usage of information and communications technologies (ICT)²

Participants also stated that TVET systems are increasingly integrating green and sustainable practices.

"We have an ongoing responsibility to reduce the impact on the environment by ensuring that our teachers, students, workers, industry partners and wider community are educated in the benefits of sustainability practices across our campus."

Participant from China

A participant presented an initiative to establish, for the first time in the Egyptian TVET system, a renewable solar energy training programme and to include it in the occupations list in courses taught at technical secondary schools:

"The initiative was based on real demand from solar energy industry partner who was planning to build the biggest solar photovoltaic power plant in upper Egypt."

Participant from Egypt

Participants also debated the need to develop new qualifications in the agricultural sector.

"Africa for instance is an agrarian continent where all the food producing potentials are being under-utilized probably due to lack of skills needed to fully develop the sector. This has resulted in issue of food security, hunger, unemployment and wastage of produce perhaps due to lack of processing facility and skilled manpower."

Participant from Nigeria

Agriculture also appears as the third most relevant economic sector in terms of demand for new qualifications and competencies in a mini survey conducted during the virtual conference. This sector seems to be even more important in the case of African countries and regions where food producing potential is under-utilized due to a lack of skills needed to fully engage with the sector. The results of the mini survey also suggest that advanced cognitive, and professional and technical competencies are the most important types of competencies in the context of greening TVET.

Concerning the demands for new qualifications and competencies in TVET in the field of entrepreneurship, several participants stated that entrepreneurship must be included as a transversal competence in TVET. A participant suggested a list of entrepreneurial competencies, including understanding basic financing, managing events and connecting via social networking, recruiting effective professionals, training and managing staff, mastering basic project management, understanding basic sales, and spotting new trends.

² Basic competencies include literacy, numeracy, and digital literacy. Advanced cognitive competencies include critical thinking, complex problem-solving, creative thinking, learning to learn, and self-regulation. Social and emotional competencies include conscientiousness, responsibility, empathy, self-efficacy, and collaboration. Professional and technical competencies refer to occupation-specific competencies, with sufficient potential to be transferable and applicable in new or other fields.

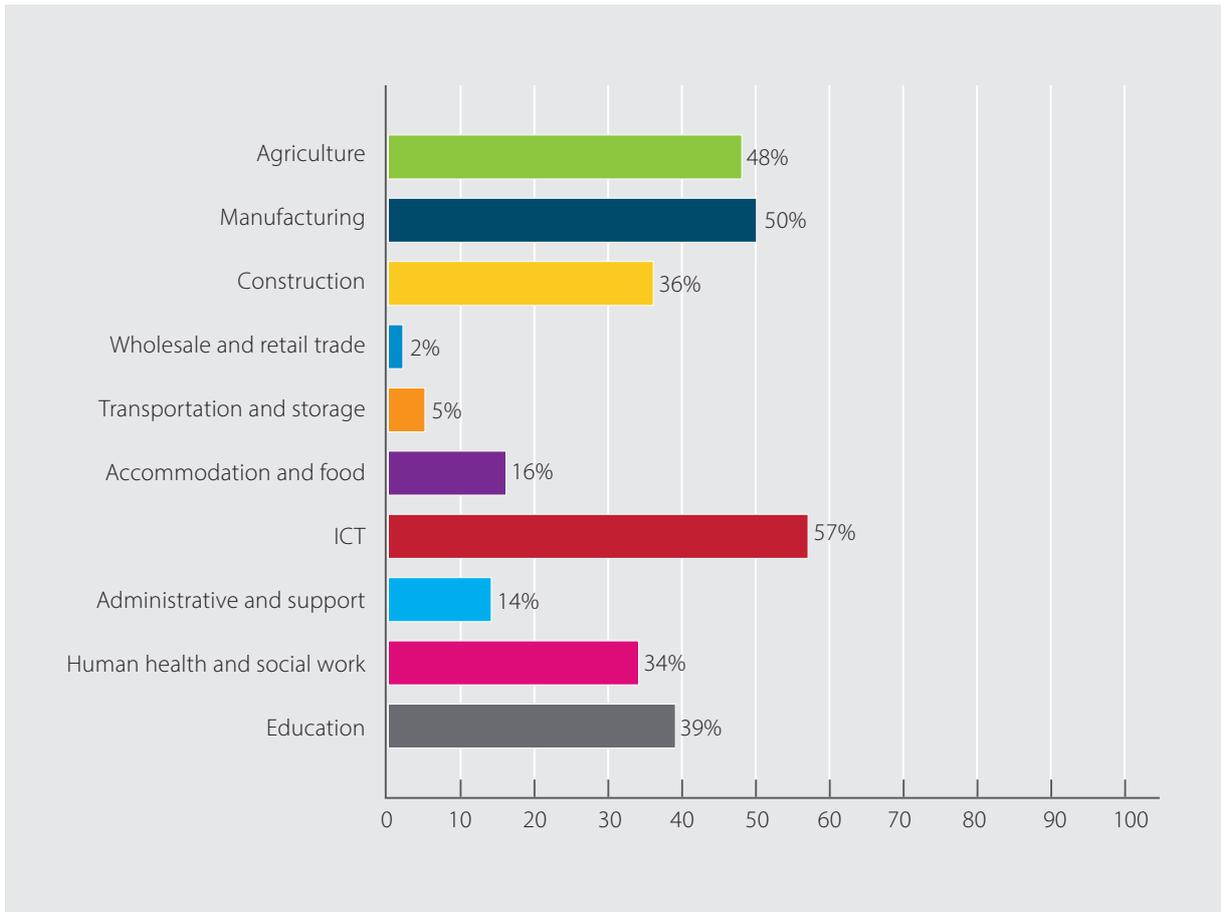


Figure 1

Results of the mini survey question: please select three economic sectors that present high demand for new qualifications and competencies in your TVET system

According to the results of the mini survey, see figure 1 above, all four types of competencies are very relevant in the context of entrepreneurship, with emphasis on advanced cognitive competencies and socioemotional competencies.

Comparatively, the BILT thematic area of migration was less mentioned by participants as an important area in terms of demands for new qualifications and competencies in TVET. Having said this, one participant, citing the case of Canada, suggested that new qualifications and competencies in TVET need to promote efforts toward global citizenship education.

Furthermore, the mini survey asked participants what the most relevant types of competencies for supporting the integration of migrants are, including the competencies required by both

local and migrant students. Interestingly, in the context of integration of migrants in society and labour market, participants suggested that local and migrant students present a similar level of demand for advanced cognitive competencies and socioemotional competencies. On the other hand, migrant students require more basic competencies, and local students need more professional and technical competencies to support the integration of migrants in society and labour market.

Minimizing skills mismatches requires a high level of involvement of TVET stakeholders in the process of identification of new qualifications and competencies

The virtual conference discussed the need to identify and forecast TVET demands in terms of new qualifications and competencies. Participants suggested that dynamic societies and economies are always changing, and that the mismatch between demand and supply of skills cannot be fully eliminated. For this reason, recent skills policies have been focusing on achieving a reasonable minimization of skills mismatches.

Participants described two complementary strategies that can be combined by TVET systems when dealing with the challenge of minimizing skills mismatches. The top-down strategy implies that the process of identification is set at the national or regional level by ministries or TVET bodies. It leads to the update of current TVET qualifications with an impact on the whole system and can integrate a wider perspective including industry associations and research centres.

To identify demands for new qualifications and competencies, some TVET systems increasingly depend on the work of labour market observatories. Participants suggested that these observatories can vary greatly in size, geographical and thematic scope. For example, labour market observatories can present a geographical/territorial scope (for example, national or regional) or an economic branch-specific scope.

“In France, the design and update of national qualifications is based on the work of 11 inter-ministerial committees, organized by sector, which are represented by employers and employees’ organizations. The process of qualification reform is slow even if the law says that every qualification has to be updated every 5 years. Since the modality above is felt by employees as not enough flexible and time-consistent, parity branch organizations often focus on setting up their own vocational certificates having full value inside the economic sector.”

Participant from France

On the other hand, the identification of new qualifications and competencies in a bottom-up strategy happens mainly at the local level through regular dialogue between TVET providers and other local stakeholders such as companies and associations, enabling TVET providers to quickly react to changes or needs emerging from the labour market.

“The assessment of training needs at the local level can be carried out by school tutors and placement office managers with local company tutors and business experts after learners’ internships, during mid-term reviews, or after graduates’ employment.”
Participant from Italy

Both strategies use similar methods to recognize demands in terms of new qualifications and competencies. Participants described two different methods: the Training Needs Assessment (TNA)³ method and the Developing a Curriculum (DACUM) method⁴. Both methods rely on identifying relevant sources for data collection regarding demands for new qualifications and competencies. Relevant data sources can include different types of TVET stakeholders.

³ For more information on TNA: https://www.jica.go.jp/project/cambodia/0601331/pdf/english/3_TNA_01.pdf

⁴ For more information on DACUM: <http://www.dacum.org/>

Table 1

Results of the mini survey question: In your TVET system, who are the TVET stakeholders involved in the identification of new qualifications and competencies? Who should be more involved?

	Who is currently involved?	Who should be more involved?
Public TVET schools and training centres	75%	52%
Small and medium-sized enterprises (SMEs)	40%	71%
Large enterprises, including multinational companies	39%	82%
Ministry or local public authority	77%	41%
TVET national body	74%	48%
Trade Unions	54%	65%
Employers' Associations	34%	80%
Chambers	28%	81%
Other associations, including NGOs and civil society organizations	34%	79%
Individual specialists (health, gender, education)	53%	56%
Youth organizations	16%	89%
Universities/Research institutions	37%	79%

A mini survey during the virtual conference asked participants about the level of involvement of TVET stakeholders in the process of identification of new qualifications and competencies (see results in Table 1). In total, 44 participants answered the survey. According to participants, the types of TVET stakeholders that are currently more involved in this process are ministries or local public authority, public TVET schools or training centres, and TVET national bodies. Furthermore, participants suggested that other TVET stakeholders should be more involved in the identification of new qualifications and competencies, such as youth organizations, large enterprises, employers' associations, chambers, and universities/research institutions.

TVET systems and providers use different approaches to integrate competencies in TVET curricula and training regulations

The virtual conference presented four approaches to integrating competencies in TVET curricula and training regulations, which had been introduced as a basis for discussion in the framework of the BILT project.

- The **cross-cutting approach** refers to the integration of transversal competencies that are relevant to all groups of TVET learners in all curricula and training regulations of a TVET system. The virtual conference presented an example of the cross-cutting approach in a video on how entrepreneurship competencies are integrated into all TVET curricula in the IKAENPRESA project from Tknika (Basque Country, Spain)⁵.
- The **sector-specific approach** refers to the integration of specific competencies that are relevant to TVET learners from one economic sector in all TVET curricula and training regulations of this sector (such as construction-, electronic-, service sector, etc.). The virtual conference also presented an example of the sector-specific approach in a video on the Pilot-Project Pro-Deenla that supports the development of sustainable competencies among TVET learners and in-company trainers in the transport and logistics sector in Germany⁶.
- The **occupation-specific approach** refers to the integration of competencies relevant for one specific occupation in occupational-based TVET curricula and training regulations.
- The **additional approach** refers to the integration of complementary competencies in optional or additional units/modules to promote flexibility and keep TVET programmes and courses updated according to new and local demands.

While the majority of participants suggested that TVET systems implement a combination of all approaches, some highlighted the high level of importance that TVET systems give to the cross-cutting approach and occupation-specific approach. This seems to be directly related to a common understanding that competencies can be divided in transversal competencies that are integrated with a cross-cutting approach (for example, entrepreneurship or socioemotional competencies), and specific competencies that are integrated according to the needs of specific occupations.

Furthermore, participants suggested that the sectoral approach enhances workers' adaptability and can be important to promote employability:

"Sectorial standards, instead of occupational may help making students more flexible and autonomous in terms of their competencies"
Participant from Germany

Participants recognized the additional approach as a strategy related to the individualization of curricula. While integrating additional or optional competencies in TVET curricula, TVET providers enhance curricula flexibility and students' choices.

Furthermore, an important part of the discussion focused on how to integrate new qualifications and competencies in the informal sector. A participant from Ghana suggested that the competencies provided by informal apprenticeship systems are mostly occupation-specific. Based on this idea, participants discussed the importance of recognizing prior learning (RPL) and how to insert this in TVET curricula or training regulations. While some participants stated that it is important to integrate RPL in all TVET curricula and training regulations, others suggested that this is not necessary, because TVET providers can also use RPL as an activity or service independent of training.

⁵ Watch Jose Ramon Gomez presents how the entrepreneurship curriculum is organized in the IKAENPRESA project from Tknika (Basque Country, Spain).
<https://www.youtube.com/watch?v=myUnh7utY1A&feature=youtu.be>

⁶ Watch Verónica Fernández (BIBB) and Harald Hantke (University Lüneburg) present the Pilot-Project Pro-Deenla developed by the German Federal Institute for Vocational Education and Training (BIBB).
<https://youtu.be/pDNP090qWvo>

Designing flexible TVET curricula and training regulations requires multilevel governance

Another major point of the discussion in the virtual conference focused on flexible curricula and training regulations in TVET. According to one participant:

“Flexibility implies the possibility for a single TVET provider to use a specific amount of time (hours) in the curriculum to teach contents and methods of their choice”

Participant from Italy

Several participants suggested that the structures of nationally recognized TVET qualifications are not flexible enough to cater for emerging or localized needs. One participant suggested that:

“Qualifications remain grounded in traditional ideas of how a qualification should be structured and this reduces the timeliness of responses to new technology, job changes and work processes in industries. Additionally, it reduces innovation in the TVET sector or the ability of the TVET sector to facilitate innovation in industry”

Participant from Australia

For several participants, flexibility implies that national curricula provide key learning outcomes to be achieved, but that the implementation of curricula, including training approaches, is left to the TVET providers. To implement flexible TVET curricula and training regulations, TVET systems must ensure a strong quality assurance system in place.

Furthermore, participants also suggested that flexibility is often obtained through the modularization of the TVET System. A participant suggested that while TVET providers are mainly responsible for creating and implementing modularization in TVET, that there is a need for legal frameworks to give TVET providers the required flexibility, with effective collaboration of policy-makers with TVET leaders. Participants indicated that modules can easily be changed, developed or ceased by TVET providers following the perceived needs. However, modularization can also represent an issue for TVET systems when units are treated/taught and assessed separately. As one participant stated:

“Modularization can be too atomistic and can undermine engagement. In assessment, modular approaches can lead to fragmented, incoherent student experiences, and duplication of assessment”

Participant from the United Kingdom

The implementation of new qualifications and competencies can be better achieved through innovative teaching and learning approaches, practices, and technologies

The virtual conference also debated the implementation of new qualifications and competencies in terms of teaching and learning approaches, practices, and technologies. The virtual conference included a video presentation⁷ by Cometa (Italy) on the impacts of new qualifications and competencies on TVET didactics, learners' empowerment, the professional development of teachers and trainers, and the relevance of skills ecosystems.

According to participants, TVET systems use different types of innovative teaching and learning approaches and practices to deliver new qualifications and competencies. Together with the traditional focus on school- and work-based learning approaches, TVET systems are increasingly attentive to the potential of blending school-based and work-based learning with virtual and distance learning, especially in the context of the current COVID-19 pandemic. In terms of innovative teaching practices, participants mentioned different types of possibilities, including for example the infusion of soft skills into curricula through experiential learning strategies (role-playing and problem-based learning activities), collaborative learning, workplace and industrial visits, as well as computer assisted instruction.

The virtual conference also discussed promising types of technology for TVET teaching and learning. In general, participants showed great interest in digital platforms for communication with students (including the use of standard message applications):

"I'm using a message application to post my course material for the "knowledge" part and to post videos as demos for the "skills and attitude" parts of the curriculum. I also use it to manage the course work of my students, including their presentations and tasks to be delivered back. Most of the work is delivered on a specific group and the assessment part including course work is done on in private communication and not on the group."

Participant from Egypt

Digital platforms can allow students to interact with their teachers and trainers, including experts from the different companies, as well as TVET learners from different countries to share experiences with peers from other institutions. Furthermore, technology has great potential to create simulation-based learning, as well as virtual visits and laboratories. Participants also stated that the use of audio-visuals is very prominent and a good solution to motivate students and create interest:

"In Ghana, we were transitioning from the traditional approach of delivering TVET to competency-based training which involved a lot of practical activity that is industry driven. (...) As part of this delivery, a lot of innovation and technology was required. Simulations and audio visuals were very prominent."

Participant from Ghana

Lastly, the virtual conference discussed the individualization of learning pathways, based on a presentation⁸ provided by Omnia (Finland), and discussed how this is beneficial to TVET learners. It became clear that what constitutes an individualized learning pathway is not necessarily the venues of learning (school-based; work-

⁷ Watch Alessandro Mele (General Manager, Cometa) present the impacts of new qualifications and competencies on TVET didactics, learners' empowerment, the professional development of teachers and trainers, and the relevance of skills ecosystems. <https://www.youtube.com/watch?v=fnZqc2LM2uo&feature=youtu.be>

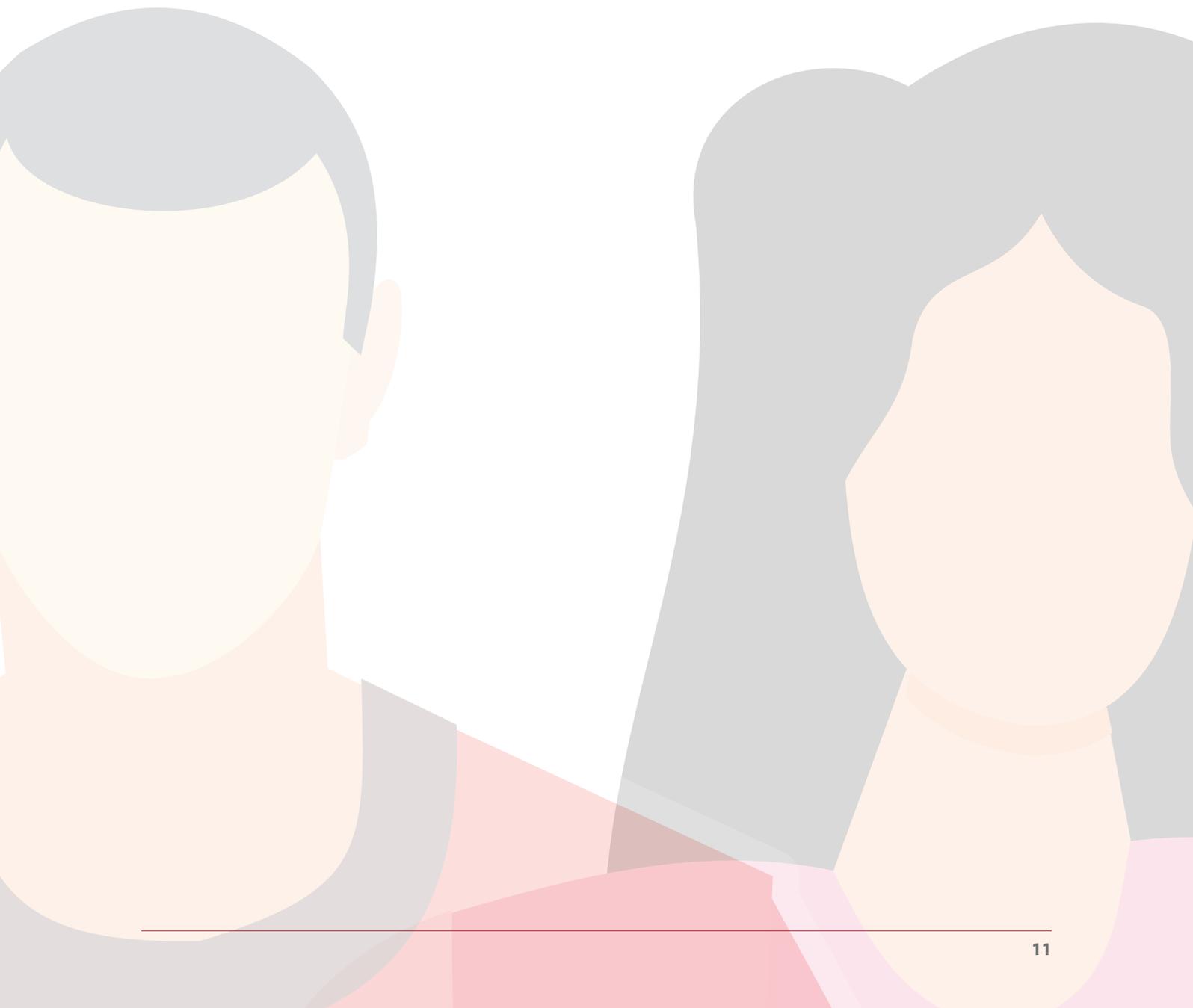
⁸ Watch Mika Heino (Omnia, Finland) present Omnia's vision and method of individualizing learning pathways in TVET. <https://www.youtube.com/watch?v=pj1njPskQ8I&feature=youtu.be>

based; blended learning). The crucial aspect is the development of personalized plans that address the specific needs of the students.

Omnia's video presented the implementation of different types of personalized plans, such as the personal competence development plan, the individual learning plan, as well as the career plan. Participants suggested that the development and implementation of these individualized plans requires a significant amount of work, especially in large TVET providers. Therefore, one element for

further discussion is whether individualized learning pathways are more applicable when TVET students' number is very limited.

Moreover, as one participant from Kenya stated, TVET policies in many regions are not necessarily emphasizing the development of individualized learning pathways. Therefore, more needs to be done for the development of individualized learning pathways to be anchored within TVET policies, creating the possibility for TVET stakeholders to develop these pathways.



The delivery of new qualifications and competences requires strong teacher and (in-company) trainer training

The topic of teacher and (in-company) trainer training in TVET systems was mentioned by participants as a very important issue. Participants suggested that trainers' and teachers' roles are changing from being content transmitters to designers of learning spaces, integrating content, activities, resources, and communication. In general, participants proposed that teachers and (in-company) trainers should, among other tasks, understand the main TVET challenges:

- know students and how they learn;
- create and maintain supportive and safe learning environments;
- assess, provide feedback and report on student learning;
- engage in professional learning; and engage professionally with colleagues, parents/careers and the community.

Concerning the development of entrepreneurship learning in TVET, several participants showed concerns with the profile of TVET teachers and trainers in the field of entrepreneurship. According to participants, there is a great need to provide specialized training for entrepreneurship to teachers and trainers.

"I used to argue that if we have engineers or qualified teachers for hard skills, why is this not the same for entrepreneurial modules and subjects? Why do we still have teachers of entrepreneurship that have never owned a business or helped to develop one?"

Participant from Mozambique

Several participants observed an important gap in teachers' digital competencies and the capacity to use teaching and learning technologies. This gap became even more relevant considering the current COVID-19 pandemic and the need to embrace online, distance, and blended learning solutions. Participants indicated that teachers and trainers need to be further prepared to effectively provide distance learning, including not only modern digital tools but also other distance learning technologies such as TV and radio. A main concern focuses on the need to ensure that learners conduct practical activities as part of their learning in virtual environments or distance learning. Other requirements for teachers and trainers training in the context of distance learning are:

- conducting off-the-job learning and training;
- conducting work-based training programmes and ensuring that all learning is translated into practice;
- maintaining students attendance records and training performance data; and
- verifying the achievement of distance learning and training objectives.

Shared resources and learning materials

Video: The New Qualifications and Competencies Ecosystem framework

BILT team member Tristan Cole (Project officer, UNESCO-UNEVOC) and Vera Hark (Project Manager/ Technical advisor, BIBB) present the BILT project and its New Qualifications and Competencies Ecosystem.
https://www.youtube.com/watch?v=Y_6Cv1OHQO4&feature=youtu.be

Glossary of Terms

A short *glossary* on relevant terms used and debated in the virtual conference.
<https://unevoc.unesco.org/e-forum/Glossary-of-terms.pdf>

Video: Pilot-project Pro-Deenla

Verónica Fernández (BIBB) and Harald Hantke (University Lüneburg) present the Pilot-Project Pro-Deenla developed by the German Federal Institute for Vocational Education and Training (BIBB).
<https://youtu.be/pDNP090qWvo>

Video: Tknika Ikasenpresa

Jose Gomez presents how the entrepreneurship curriculum is organized in the *IKAENPRESA project from Tknika* (Basque Country, Spain).
<https://www.youtube.com/watch?v=myUnh7utY1A&feature=youtu.be>

Approaches to integration of competencies in TVET curricula and training regulations

Short document on the four approaches to integrating New Qualifications and Competencies in TVET curricula and training regulations proposed in the framework of the BILT project.
<https://unevoc.unesco.org/e-forum/Approaches-to-integration-of-competencies-in-TVET-curricula-and-training-regulations.pdf>

Video: Rethinking TVET for inclusive excellence

Alessandro Mele (General Manager, Cometa) present the impacts of new qualifications and competencies on TVET didactics, learners' empowerment, the professional development of teachers and trainers, and the relevance of skills ecosystems.
<https://www.youtube.com/watch?v=fnZqc2LM2uo&feature=youtu.be>

Video: Individualized Learning Pathways in TVET – The Omnia Approach

Mika Heino (Omnia, Finland) present their vision and method of individualizing learning pathways in TVET.
<https://www.youtube.com/watch?v=pj1njPskQ8I&feature=youtu.be>

Further reading

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About the moderator

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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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