

# Skills & Qualifications: Benefits for People

How learning and  
guidance professionals  
make it happen

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## Toolkit: first layer

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# Introduction:

## What is this Toolkit about?

**This Toolkit is about skills and qualifications, and the benefits they provide for people in a changing environment. The world is undergoing a major transformation that requires new skills and qualifications, new ways for people to know about skills and qualifications, and new ways to acquire skills and qualifications.**

Usually, we work with policy makers in vocational education and training (VET), and related areas. With this Toolkit, we focus specifically on professionals in schools, companies, training centres, employment agencies and careers guidance settings. Our goal is to open a dialogue with and among professionals, because we believe that the success of policy change and reform in skills and qualifications is largely a function of the degree to which professionals are included, empowered and resourced to deliver change. To discover what is happening in practice we recently launched an open call for success stories about the benefits of skills and qualifications. We received 469 responses mostly from ETF partner countries, as well as some from EU member states and other parts of the world. A selection of these success stories appears in this Toolkit. They illustrate existing good practice, and how people benefit from it, showing that professionals, from school directors and teachers to careers counsellors and company managers, are the driving force behind success. From here on, we will just refer to 'professionals' to cover everyone involved in the design and delivery of skills and qualifications, and in the provision of careers information and guidance and careers counselling.

We also look at the beneficiaries of skills and qualifications. We call them 'learners', short for lifelong learners, a term that applies to us all, throughout our lives, as we adjust to the rapidly changing world of employment and the risks and opportunities of new technologies. Skills and qualifications contribute to our personal development and employment, to our inclusion in society and to our mobility between education and jobs, within and between countries. But not everyone has access to these benefits, for a variety of reasons. We recognise that young and adult learners have different needs. However, we raise the same questions about both – do they have access to skills and qualifications? Are they offered appropriate learning and

guidance? All these elements – the individual learners, workers and job-seekers, professionals in every area of lifelong learning and lifelong guidance, the policy makers and government institutions, social partners, employers, sector and regional bodies, and so on – are structural parts of what is commonly known as the ‘skills ecosystem’. The ecosystem is a metaphor borrowed from biology, where it was first developed to describe living organisms and the physical environment within a certain area and – crucially – the relationships between them. This combination of structural elements and their complex, interdependent relationships is immediately recognisable in the context of skills, both as an ‘ecosystem’ in its own right and as an area within the wider education and training system. Monitoring and influencing the skills ecosystem is one of the keys to unlocking the potential of every country’s population, with their unique combinations of human capital, history, culture and natural resources.

## How to use this Toolkit



This Toolkit is made up of ‘layers’. This first layer is a ‘narrative’ which tells the overall story. The second layer provides more information and explanation about specific topics and is available online at <https://openspace.etf.europa.eu/pages/toolkit-skills-and-qualifications-benefits-people> (see QR code above).

If you’re reading this as a printed document, remember that the best way to access the whole Toolkit, including examples of good practice, information sources, and other external links online. You can use openspace to navigate through the Toolkit, and find the information that you need or are interested in. QR codes are provided throughout the publication for your convenience.

We start our narrative by exploring the context of skills and qualifications, before going on to look at how people know about skills and qualifications, and then how people acquire them. In doing so, we only provide indicative, not comprehensive, cases and references. We hope that you will be inspired to find out more about the issues involved and discuss them with colleagues, clients, students, teachers, friends and family. Because of the changes we are all facing today, it has never been more important for everybody to make the best possible decisions about skills and qualifications for the future.

## Toolkit: second layer

### A changing environment

1. Global trends and effects in ETF partner countries
2. A changing environment for professionals
3. A changing environment for learners

### How do people know about skills and qualifications?

4. Changing information sources
5. Labour market information
6. Career guidance
7. Skills and qualifications frameworks

## How do people acquire skills and qualifications?

- 8. Pedagogies**
- 9. Curricula**
- 10. Teachers and trainers**
- 11. Continuing professional development**

## Where to next?

- 12. Connecting policy and practice**
- 13. Where to next?**

# **Part 1.** **A changing environment**

**Global trends and effects in ETF  
partner countries**

**A changing environment for  
professionals**

**A changing environment for  
learners**





# Part 1.

## A changing environment

**The future holds similar challenges for everyone, regardless of location, profession or background. But in facing these challenges, we understand that professionals in ETF partner countries – a diverse and distinctive group of countries who share geographical, historical and cultural intimacy with Europe – are not all starting from the same place. In many partner countries, systems are still very centralised and fragmented in silos. Traditions that prefer knowledge over skills still weigh heavy on the present situation. Professionals have to be resourceful in resource-poor environments.**

Many colleagues, it seems, have limited opportunities and means to learn about new skills and qualifications. Their minds are not set on transforming traditional subject teaching into a learning experience that is developed with colleagues, and mixes learning in the classroom with learning elsewhere. They are not yet connected to changes in the wider world. However, as we have seen from the incredible response to our call for success stories, innovation exists in all partner countries. There are highly motivated professionals eager to learn about and embrace new possibilities. They can create and facilitate great benefit for individual learners. It is our intention that this Toolkit can be used everywhere, by professionals and policy makers alike, to scale up and strengthen these initiatives.

### The changing environment in which professionals operate

The world is going through a major period of transformation, and this is changing the environment in which professionals operate. In November 2018, we hosted an international conference entitled ‘Skills for the Future: Managing Transition’. The conference examined the effects of global trends from the perspective of developing and emerging countries, particularly ETF partner countries. The event showed that there is no crystal ball to reveal what the future will bring, but there are global trends that affect all countries, including our partner countries. Many already visible trends are changing the world of work; digitalisation, internet technology, automation, robotics, artificial intelligence, new types of work contracts, the platform economy, greening of economies, work-life balances and migration.

### Kyrgyzstan Innovative learning and guidance with employers

VET school No. 98 in Kyrgyzstan offers enterprise-oriented dual education and training for young students and adults, in close cooperation with employers. Programmes vary from short skills development courses to information technology. Workers from companies and state services come to the school for further training. The school also provides career guidance and follows graduates through tracer studies. The school has agreements for internships and employment of graduates with over 200 companies. See more: [www.pls98.kg](http://www.pls98.kg)



**Netherlands**  
**Attracting young adults into technical professions using virtual reality**

*Metalent* offers learning on the job for technical professions. To help young adults make a career choice, *Metalent* and Cross Reality Experts created a virtual reality tour in which students experience the creation of a single product, from design to implementation, and see people doing their jobs. The VR tour can be used in a school or job fair, with a guest lecturer providing support.



The conference concluded that the best way to manage transition into the future world of work is by investing in people's skills. Soft skills or key competences are now as vital for employment as job-specific technical skills. But let's not forget the importance of qualifications: the best way to manage transition is by investing in people's skills and qualifications.

To take one 'headline' story, migration is affecting almost all countries. People leave their home countries for many reasons, go to other countries and try to build a life. They stay, return or move on. And they bring skills and qualifications from one country to another, and acquire new skills and qualifications on the way. Migration will continue, and people should be able to benefit from skills and qualifications acquired in any country. Their qualifications should be comparable, readable and portable to new destinations. This requires greater cooperation between national and international partners not only at system level but also at the level of providers. It also acquires an open and accessible system for the recognition and validation of skills and qualifications.

As a professional working in education and training or careers guidance, you face wide-ranging changes at system level, as well as changes that are specific to your role. Career paths are becoming more diverse, with more transitions from school to work, between jobs, and at different life stages. Having the right combination of skills and qualifications is vital for navigating these transitions successfully. Learners need high-quality, accessible information and guidance to make choices about the careers they want to pursue and the skills and qualifications they need to acquire. Anticipating the skills needs of tomorrow is becoming more difficult. It requires efficient use of traditional data sources, as well as new analytical methods and innovative methodologies to identify emerging occupations. Big data is already widely used, and is going to have an even bigger role.

The internet has made learning content widespread and accessible to anyone with an internet connection. Learning can happen anywhere and at any time, often online, outside the classroom. Nowadays, a smartphone is the young learner's best friend. New forms of learning and new learning pathways are emerging, and learning processes are becoming more flexible. Many of you, as board members, directors and teachers at education and training provider organisations, will have to make such new learning models work, but to be able to achieve this you need a degree of autonomy to make decisions about the provision you offer. And you need to cooperate with other providers and, increasingly, with the companies, institutions and sector bodies that provide employment for the learners, job-seekers and other individuals whose lives you so powerfully enrich.

### **Skills and qualifications: A new balance**

*“Employers don't need qualifications, they need skills,”* said an employers' representative at a recent international conference on qualifications. *“But the easiest way for employers to know that someone has skills, is through a qualification.”*

Qualifications have always been an important means of making skills visible. In the Middle Ages, young craftsmen (and it was only men in those days), could take a test to prove they had mastered their craft, after many years of working under the supervision of a master. Only if the artisan passed this test could he call himself 'master' and start his own business.

Today, qualifications set minimum requirements for knowledge and skills, and for levels of responsibility and autonomy, expressed as learning outcomes. To acquire a qualification, a learner has to go through an assessment to prove that the learning outcomes have been achieved. The minimum requirements and the assessment are important for transparency and equity; anyone can find out what is

### Albania

#### **ALMOOC provides the skills needed by the IT industry**

IT professionals are in high demand in Albania but IT graduates lack sufficient knowledge of the latest programming languages and the newest trends. ALMOOC provides online IT courses in Albanian to enable young Albanians to master the latest IT know-how. Some 8,500 people, of which 42% are women, have already used ALMOOC. The courses are also available for people with a non-formal IT background. ALMOOC is supported by RisiAlbania, is an innovative project, supported by the Swiss Agency for Development. See more: [www.almooc.com](http://www.almooc.com)



required to gain a qualification, and whether a particular individual has met those requirements, and everyone has to meet the same minimum requirements. Of course, this is an ideal situation, and it can be hampered by many factors. It is difficult for people to acquire a qualification if they have no access to good quality education or training, if they cannot get a placement in a company or if they are in schools lacking equipment or other resources. Trust in qualifications will be low without quality assurance in assessment and certification, or if diplomas can merely be bought. Ongoing reforms in our partner countries, as elsewhere, are designed to tackle these issues and increase access to, and trust in, qualifications.

In the meantime, the talk is all about skills — skills for the future, skills as the dynamic currency of the modern workplace, skills as the means to social inclusion. And, as we've seen, this means not only technical skills, but also 'soft' skills or key competences. They are often summarised as the '21st century skills' that people need to keep up with changing societal and workplace demands. There is a growing supply of education and training outside formal systems to help meet this demand for skills. A range of online courses, such as MOOCs (massive open online courses), is available to anyone with an internet connection. New modes of social learning are delivered via smartphone apps. All types of courses are offered, at various levels, on different topics and in numerous languages. In addition to online courses, most countries have a range of private education and training providers offering skills development. These are realities now, but the risk is that qualifications have not caught up with them. This is because the qualification process, from skills needs analysis to design and implementation of curricula and the awarding of qualifications, takes many years. Moreover, the format of qualifications does not often allow quick adaptation to changing needs.

Learning can happen anywhere, and this has become more significant because learning content is much more widely available than ever before. Not all learning has to be captured in qualifications, but nobody wants to abolish driving licenses or nursing diplomas. But while qualifications remain the best way to create trust in people's

skills, there is a clear demand for change. Qualifications need more optional features to respond to particular situations, for example by dividing them into units. As digital technologies transform education and training, so, inevitably, they impact qualifications as well. New credentialing methods that capture, recognise and validate learning outcomes are spreading, including digital badges and micro credentials. These emerging forms of credentialing offer new ways to steer lifelong learning, and to get learning recognised at all life stages and across sectors and borders. In the end, it is the assessment of learning outcomes which provides the transparency and the trust in someone's acquisition of the desired skills. Qualifications will change, but the need for assessment (or measurement) of learning outcomes remains constant.

### **Systemic responses at EU level**

The website of the European Commission's Directorate General for Employment, Social Affairs and Inclusion states that, "people need to be equipped with a variety of skills ranging from basic skills, such as literacy, numeracy and digital, to vocational or technical skills as well as entrepreneurial skills and transversal skills, such as foreign languages or the ability to learn and take initiative." European education policies broadly aim to equip young and adult learners with skills and qualifications that give them the chance of decent work, and provide employers with the workforce they need. VET has a major role to play in increasing people's employability, but VET systems everywhere are under pressure. They must not only provide job-specific skills, but also ensure that learners gain generic employability skills to increase their life chances. In 2012, the European Commission communication 'Rethinking Education: Investing in skills for better socio-economic outcomes' put VET at the heart of creating better skills, growth and jobs.



**People need to be equipped with a variety of skills, not only job-specific ones.**

It sets high expectations; basic skills for everybody, 'world-class' VET systems, and a concentrated effort to promote transversal (or 'soft') skills, STEM-related skills and language learning. To achieve this, the document calls for a fundamental shift in learning, teaching and assessment. The future of VET was the theme of the Commission's Vocational Skills Week in 2018, sending a clear message that VET is a first choice at all stages, whether for initial qualifications or later retraining. The Commission is now planning a network of national Centres and transnational Platforms of Vocational Excellence, to bring a holistic approach to excellence in VET.

But one of the biggest challenges in Europe is helping adults who have not made it into upper secondary education, let alone enrolled in a formal VET institution. Some 70 million European adults struggle with literacy and numeracy, and don't have the skills to use digital tools in their day-to-day life. Following the launch of the New Agenda for Skills and Jobs in June 2016, the Commission introduced an initiative known as Upskilling Pathways to provide low-skilled adults with "a minimum level of literacy, numeracy and digital skills". The Upskilling Pathways Recommendation, adopted by the European Council in December 2016, calls for a process of skills assessment, leading to a tailored and flexible learning offer with appropriate validation and recognition, and ongoing follow-up. The programme has multi-billion Euro support from several funding initiatives. The need for greater levels of digital skills is key to preparing Europe for the global challenges outlined earlier, and the Commission's work on the Digital Competence Framework, already in its second iteration, is helping citizens to become "digitally competent" through self-evaluation of digital skills gaps, goal-setting and accessing the necessary training.

The new balance between skills and qualifications is important here, and in 2017 the Council adopted a revised Recommendation on the European Qualifications Framework (EQF). The aim is to strengthen the EQF's founding Recommendation of 2008 and extend its work of making the level, content and value of qualifications clearer to learners, providers, recognition bodies and employers. Our sister agency, the European Centre for the Development of Vocational Training (Cedefop), is exploring options for the future of VET policies in Europe. They have published three different scenarios, which all point to the critical choices we must make now: 'Pluralist' VET based on lifelong learning; 'distinctive' VET focused on occupational and professional competence; and 'special purpose' VET only dealing with job-oriented training. Similarly, the Advisory Committee on Vocational

### **Lebanon** **Training and certification for employees and job-seekers**

The Lebanese Training Center (LTC) offers training for employees, entrepreneurs and family business owners to update their skills and help them get better in their jobs. Unqualified jobseekers can get training for a qualification for the labour market. Successful trainees receive a certificate signed by the Lebanese Chamber which operates the LTC. The certificate is valued by the Chamber's 15,000 member companies. See more: [www.ltc.org.lb](http://www.ltc.org.lb)



Training (ACVT), an expert group of government and social partner representatives assisting the Commission on the development and implementation of VET programmes and policies, published its 'Opinion on the Future of Vocational Education and Training Post 2020' in December 2018. This Opinion sets out the ACVTs vision for "excellent, inclusive and lifelong VET" based on "enhanced partnership between VET and the world of work". The Opinion also calls for a new Communiqué bringing VET ministers, the Commission and social partners together around a vision for VET to 2030, and the creation of a proposal to "streamline and consolidate the EU VET policy framework, governance and existing EU instruments."

Why does this matter to you, as professionals in our partner countries? We think that EU priorities are also relevant for partner countries. As in Europe, a fundamental shift in learning, teaching and assessment is taking place in partner countries. To keep up with these changes, partner countries are also seeking to create more agile vocational education and training systems that can provide more tailored solutions to different groups of learners.

### **Benefits for people: A changing environment for learners**

People want skills and qualifications in order to utilise their talents and abilities, build fulfilling and rewarding careers, and lead decent lives. They don't think of themselves as 'human capital', or talk about their skills as a 'currency' to be exchanged in labour markets. They think of themselves as unique individuals with their own expectations, ambitions, career aspirations and personal development plans. They want to earn an income from work that is meaningful and fits their interests and abilities. For employers, the skills of their workers are an asset if those skills are aligned with changes in the company and in relevant markets. But workers' skills can easily become obsolete and act as a brake on innovation. Employers can anticipate and mitigate this risk by motivating their workers through internal mobility, upskilling and validation of experience, as well as formal education and training. Not all employers face identical skills challenges, but all look to the effects of



competition and technology on their returns and, thus, their survival. They need timely, detailed and localised skills and qualifications information to support strategic decision-making.

Researchers worldwide have investigated the positive effects of learning on individuals and on society as a whole. People enjoy learning; it makes them happy and curious, interested in discovering new things. Learning improves people's resilience, leads to increased civic participation, and strengthens social solidarity. Learning as an end in itself, and a means of acquiring new skills, therefore contributes to happier and healthier lives, and better social integration. Policy makers understand this, as they seek to address the growing impacts of social inequality and ethnic heterogeneity.

Although learning is valuable for people regardless of their level of skills or education, many people, young and adult, lack basic skills and are therefore less likely to access the breadth of benefits learning can bring. The European Lifelong Learning Index shows that a country's level of social cohesion correlates with the distribution of educational opportunities. Countries with relatively equal educational opportunities have higher levels of social justice and cohesiveness than those with less equal access to lifelong learning. The wider the gap in education opportunities, the fewer chances there are for civic participation and enhanced quality of life. A growing gap in income distribution due to educational differences not only leads to worse living conditions for those with lower incomes, but also to negative consequences for health, quality of life and life expectancy.

But creating more equal educational opportunities is not just about increasing the amount of time people spend in school. Learning is not the same as going to school. What counts is how people learn, what skills they develop, and what qualifications they gain. Research for OECD's Programme for International Student Assessment (PISA) and Programme for the Assessment of Adult Competences (PIAAC) concludes that more education does not necessarily lead to better skills and qualifications.

### **Serbia** **Real-life learning for students**

Students at Mihajlo Pupin school make toys from the electrical components of old circuit boards, and sell them at student fairs. The project makes students aware of the environment, because they recycle electronic waste. Making the toys develops students' creativity, and selling them increases their business experience. The proceeds of the fair are donated to charities, which creates empathy towards other children. See more: [www.etspupin.edu.rs](http://www.etspupin.edu.rs)



## Israel

### Changing learning context

In the Cell Aviv (Tel Aviv on cellular) project, students and teachers created interactive learning products linked to special places in their community. Examples are mathematical puzzles derived from public buildings and use of alternative energy. The project has three principles: location (learning outside the classroom); community (contributing to the community); and active learning (transforming the role of teachers). See more: <http://beta.experiencecity/cityportal/#/sites/tlv-cellaviv>



### When systems fail: Winners and losers among young people

PISA measures proficiency in reading, maths and science among 15-year-olds in formal education. The latest data show that large numbers of 15-year olds lack basic competence in these areas. In the EU, on average, one out of every ten people aged 18 to 24 has completed only lower secondary education. Young people who remain outside education, employment or training (known as NEETs) form a particularly vulnerable group. Between 20 and 30 per cent of youths in ETF partner countries for which data are available belong to this group, and girls are over-represented. Why do so many young people fail to acquire basic skills in formal education? And why do they drop out in such numbers? There are many factors, from the school environment or learning context, to domestic problems and cultural pressures. For some, being in any classroom is boring compared to being in the 'real' world.

Low qualification levels and early school leaving undermine young people's career prospects. But there are also people who complete post-secondary education or vocational training, only to find that their qualifications have no value because of poor quality training, or a lack of employment opportunities. In 2002, a group of researchers from Tübingen University published a study based on interviews with 280 young people from nine European countries.

The researchers wanted to understand how young people navigate the transition from school to work, where paths have become increasingly individualised and fragmented. They distinguished between those who were 'disengaged' from the formal transition system, and 'trendsetters' who were successful in following individual pathways. The disengaged became demotivated by a lack of realistic expectations in terms of mainstream education and training, while the trendsetters made use of informal learning, support networks and work experience, and were seen as 'entrepreneurial'. Both groups expressed negative views of school and career guidance, describing formal education as 'too much theory, too little practice', and 'disconnected from reality'. But

they dealt with these negative experiences very differently. The disengaged group felt discouraged and frustrated by boring learning experiences. Both groups felt a lack of connectedness between learning and living.

A study by Eurofound in 2011 found that “those with a low education level are three times more likely to become NEET compared to those with tertiary education”. Young people know what’s going on around them, but sometimes make poor choices. However, as François Mitterrand said, “If young people are not always right, the society which ignores and knocks them is always wrong.” Therefore, a focus on the positive effects of learning seems an obvious strategy to counter young people leaving education prematurely, and the best – indeed, the only – way to deliver that strategy is recognising and supporting the efforts of the professionals who are the subject of this Toolkit. To maximise positive effects for all young learners, learning should be more meaningful and you, the professionals, have the direct, face-to-face opportunities to ‘activate’ learners, a term that encompasses encouraging curiosity, embracing ambiguity and supporting the effective practice of reflection.

Career guidance and counselling is just as crucial as teaching in this context. Almost all the Tübingen interviewees described negative experiences with career counselling, seeing it as routine, distant and not connected to their needs. Young people want their career counsellors to take their whole personality into account, not just the aspect related to work or qualifications. For young women, counselling can be especially frustrating if they are advised to consider only stereotypical female professions such as hairdressing or retail, which often have low status, when they would prefer greater prospects. It is not only frustrating for the women, but also a loss for society.

The shift in attitudes that would enable women to make better career choices is not just a matter of moral principle. Global management consulting firm McKinsey calculated in 2015 that reducing gender gaps in employment could increase world GDP by \$12 trillion a year by 2025, a sum equivalent to the GDP of Japan, Germany and the UK

### **Kosovo**

#### **Opportunity scouting: a course for young people to choose their careers**

Opportunity Scouting is a training programme for young people. It includes Career Orientation and Soft Skills training, which prepares young people for a job with duties and responsibilities in a virtual company. In Ferizaj, youngsters supported by GIZ (German Corporation for International Cooperation) formed the virtual company Ka Pun’ with the objective of creating a municipal catalogue of services and jobs available to youth in the local labour market. (<https://yesforkosovo.org/opportunity-scouting/>)



### **Turkey** **Girls encountering technology**

Turkish teacher Selcuk Yusuf Arslan encourages his female students to choose a career in IT. He partnered with Microsoft Imagine Academy to offer IT training for around 1,000 female students at his school. Students received a Microsoft Certificate, a big step in their IT career. Following the training, female students' interest in IT increased from 11% to 60%. See more: [www.selcukyusufarslan.com](http://www.selcukyusufarslan.com)



combined. It is not only the economically advanced countries who would gain. McKinsey found that nearly ten per cent of the GDP gain – some \$1.1 trillion – would be realised in Eastern Europe and Central Asia. It is hard to see why any country would not want to grasp this opportunity. In countries with high youth unemployment, young people of both genders ask for information about developments in international rather than in national labour markets. They are also interested in self-employment, and 'second chance' education (perhaps better referred to as reintegration education), particularly in languages and technology. Most realise they will need a diploma of some sort, but those who are 'disengaged' tend to doubt the value of diplomas, caught between a feeling of growing frustration in class and the pressure to get at least a minimum qualification.

### **When systems fail: Winners and losers among adults**

Many adults attend courses out of personal interest, to learn something new, improve performance in their current job, or find a better job. The learning is voluntary, and the motivation is intrinsic. Surveys of adult learners engaged in voluntary education and training show they are generally satisfied with the effects of learning on their personal, social and professional lives. The surveys also show that it is primarily the learning itself that creates the positive contribution. Many adult learners mention experiencing joy in learning, in some cases in contrast to previous school experiences. In addition to skills directly related to the course subject, learners gain generic skills such as learning-to-learn, social, communication and digital skills. These not only contribute to the personal and social benefits of learning, but also to professional and work-related benefits.

The European Commission's Benefits of Lifelong Learning (BeLL) research project, carried out between 2011 and 2014, conducted interviews with 8,500 adult learners in nine EU member states and in Serbia. The findings show that the lower the educational level of learners at the outset, the more positive the changes they attributed to participation in a course. A further finding showed that generic skills are an important by-product of adult education. Adult learners



in the BeLL study mentioned gaining or improving many skills, some obviously connected to their course and others with no connection. They also reported that these unrelated skills were key to their personal or professional development. Although very few participants in the BeLL research attended voluntary adult learning explicitly for work-related reasons, many identified work-related benefits, including gaining transferable competences in languages, digital skills, social skills and so on. There are also wider benefits, such as improved mental well-being and work-life balance. However, adult learning statistics in the EU show that over 80 per cent of non-formal adult education is work-related, and voluntary courses – despite the benefits – are not considered an important activity within adult education. The statistics also show that young, well-educated people take up a disproportionate share of lifelong

**A focus on the positive effects of learning seems an obvious strategy to counter young people leaving education prematurely.**

### **Serbia** **Adult education for deprived groups**

The Law on Adult Education in Serbia makes it possible for VET providers to organise training for adults. Some schools organise special training for people who have had limited access to learning and guidance, or no access at all. For example, a training scheme for prisoners in Zabela penitentiary helps them reintegrate in society, while training for low-skilled unemployed people helps them acquire a professional welding qualification. See more: [www.poljsk.edu.rs](http://www.poljsk.edu.rs) and [youtube.com/watch?v=OniU79cU80c](https://www.youtube.com/watch?v=OniU79cU80c)



learning opportunities.

OECD's PIAAC complements PISA's view of young people by tracking adults' proficiency levels in literacy, numeracy and problem solving. PIAAC data show that large numbers of adults in OECD member countries are struggling with these foundation skills. Around 20 per cent lack basic literacy and numeracy skills and around 40 per cent lack basic problem solving skills, although the level and distribution of skills differ substantially, both across and within OECD countries. At present, only four of our partner countries participate in PIAAC research, and we do not have a clear picture of the differences between them and the OECD average. Nevertheless, the PIAAC figures are worrying. Too many adults lack the basic skills needed to cope in fast-changing societies, which carries significant risks for social cohesion and economic development.

In 2016, average participation in lifelong learning among adults in EU Member States was 10.8 per cent. However, actual levels vary widely, from 25 to 30 per cent in Scandinavian countries to less than two per cent in Bulgaria and Romania. The EU is responding with political commitment and an ambition to support adults with low skills levels, for example by setting a target of 15 per cent participation among 25 to 64 year-olds by 2020. But great efforts are needed to achieve this. The Upskilling Pathways programme, as mentioned above, offers adults opportunities to enhance foundation skills such as literacy, numeracy, and digital skills and/or acquire a broader set of skills by progressing towards higher qualifications.

But it's not only low-skilled adults who are at risk of missing out on the personal, social and professional benefits of lifelong learning. People may be established in the workforce, with skills that were relevant when they began their careers, but changing technologies and economic practices mean they face frequent demands to reskill.

Without the appropriate individual motivation, business case, and access to relevant training, large numbers of people are left on the

sidelines, unable to make a decent living. Yet there are worldwide reports of skills shortages. For example, in Italy 37 per cent of employers report difficulties filling vacancies, despite a national youth unemployment rate of 32 per cent. In Arab countries, women are thriving in school and graduating with advanced degrees, but their participation in the workforce remains low. And while countries with strong economies like Sweden and Germany have taken large numbers of refugees and asylum seekers and offered numerous employment support projects, few have found jobs matching their experience and skills.

Moreover, when it comes to upskilling and reskilling, older workers seem to be a forgotten group. The world population as a whole is ageing, and UN data shows that over the next thirty years the proportion of the global population aged 60 and above will increase to one in five. Studies based on employee surveys suggest that older employees take a much lower share of training than younger colleagues. Many older workers seek opportunities to learn and develop, but don't find all types of training equally effective. They are just as motivated to learn, but prefer informal training which is directly relevant and utilises their current abilities. There are many different factors behind these examples, but what they have in common is that entire groups of people are excluded from contributing to cohesive and inclusive economies, and the potential benefit of their talents is lost, both to them and to society.

### **When systems succeed: Connecting policy and practice**

Ideally, when policies get implemented they affect practice, and what happens in practice provides feedback to improve policies, creating a virtuous circle of quality improvement. Governments initiate reforms in education and training to respond to the challenges outlined above, by enhancing the quality of qualifications, supporting skills development, and promoting lifelong learning and guidance. But do people benefit from new policies? For instance, some policies cannot be implemented, which likely means that they

## Georgia

### **How one career guidance manager can make a difference by building partnerships**

Career guidance manager Fati Jikidze of Community College 'Iberia' connects with employers to increase scholarship and employment opportunities for her students. She talks with employers about their business, and tells them about the College. This creates a win-win situation, because employers go to her when they have vacancies, and College graduates can start their working careers and improve their skills. See more: [www.iberias.ge](http://www.iberias.ge)



are not good policies in the first place. Sometimes good policies are not implemented because of a lack of resources, in which case nobody benefits and the policies remain little more than pieces of paper. Similarly, if good results at practice level are not supported by policies, they are unlikely to be sustainable or scalable. And if lessons from good practice do not filter back to the policy level, only a limited number of people see any benefit.

But things don't change because of systems or institutions, they change because of people. Therefore, much rests in your hands as professionals on the 'front line', whether you are called teachers or trainers, guidance counsellors or advisers, and whether you work in schools or adult learning institutes, inside companies or as external service providers. As professionals, you have great influence over whether, and how, people benefit from skills and qualifications. To use that influence well, you need an environment that allows creativity, innovation and collaboration with partners. You are best placed to observe how policy changes unfold in practice, and record whether learning and employment outcomes are actually improving. Your insights will determine, to a great extent, what is learned from reforms, and how that is reported back to the policy makers who set the reforms in motion. As professionals working in schools, companies, training providers and employment and careers guidance services, you play a vital role. You are close to the beneficiaries of skills and qualifications, and serve as the bridge between policy and practice. If you're a teacher, you're probably taking on new roles such as coaching students, facilitating project and team work, providing individual support and offering constructive feedback. In addition, you're networking more with colleagues in companies and in your own and other schools, to strengthen interdisciplinary approaches and work-based learning opportunities. If you're a professional delivering careers education in schools, you can create links with the world of work and the wider community, thereby helping to promote





social justice, equity, equality and inclusion.

Whatever your specific professional tendency or title, by empowering people with skills and qualifications you play a vital part in making the opportunities and benefits of social, economic and technological change available to all.

**Things don't change because of systems or institutions, they change because of people**

## **Part 2.** **How do people know about skills and qualifications?**

**Changing information sources**

**Labour market information**

**Career guidance**

**Skills and qualifications  
frameworks**



## Part 2.

# How do people know about skills and qualifications?

**In theory, there are two stages to complete when people set about gaining skills and qualifications. They need to know what skills and qualifications are available and suitable for them; and they need to acquire them. But in reality, things are never so simple. We turn our attention now to the first stage: how do people know about skills and qualifications?**

Europass, the EU's common framework for the provision of better services for skills and qualifications, states that *"Individuals, when looking for a job, or making decisions on learning, studying or working, need access to information and guidance on what opportunities are available, on how to assess their skills and on ways to present information about their skills and qualifications."*

For many individuals, personal networks are the number one source of information and contacts when it comes to finding work, building a business, or choosing a learning or training pathway to qualifications. However, they may not have access to such a network, or may not have the opportunity to make use of it. Therefore, knowing how to find accessible, timely and relevant information and guidance on skills and qualifications is critical. At the same time, employers and policy makers need labour market information to understand competitive trends and make good policy decisions. And everyone benefits from labour market intelligence, which Cedefop describes as "labour market information that has been analysed and interpreted before presenting it to the public. Essentially most careers information is labour market intelligence"

### Georgia Work Skills Development programme (WSD) makes VET an attractive option for young people

Georgians care about education, but not many pupils choose VET pathways when they transit to secondary education level. Beyond structural issues, there was another, simpler problem – pupils had no information on professions. The Work Skills Development Programme brought to schools lively classes teaching real tasks, actions and roles of dozens of professions. The programme's motto is Taste and try! [www.wsd.geclasses](http://www.wsd.geclasses) through the Work Skills Development programme. *Try it out!* is the motto. [www.wsd.ge](http://www.wsd.ge)



Information about skills and qualifications is as important to individuals such as learners and workers, as it is to employers, experts in international agencies and decision-makers in government institutions. Good information is accessible, credible, timely, readable and focused on its users' needs ('accessible' means content is available to all, regardless of sensory or physical abilities, while 'readable' means that content can be read and understood easily). Information about skills and qualifications has high social value, because it helps people make their own life and career choices. Good information motivates workers, job seekers, learners and employers to engage with and invest in lifelong learning. It supports equality of access to learning and career options that meet an individual's aspirations and match with market opportunities. That means individuals and social groups facing various forms of inequality, such as migrants, the unemployed, inactive women, young people not in employment, education or training (NEETs,) and adults with low or obsolete skills, can be encouraged to pursue opportunities for upskilling, with the related social and economic benefits. But where do people get this information? Is there enough high-quality information about skills and qualifications available for your particular needs? And do you know how to direct your students, clients, colleagues or members of the public when they ask for this kind of information?

### **Information is not in shortage, but is in transformation**

There is a wealth of sources, tools and channels providing information on skills, qualifications, learning and jobs. Online portals and other digital platforms provide data, resources and user-managed tools, offering information on a wide range of subjects. These extend from basic job vacancies and employment prospects to wages, work mobility, formal study opportunities, open education resources, testimonials from peers and beneficiaries, life stories and role models, and hands-on support for CV writing and interview success. With this information, people can understand the future



prospects of a particular job and the tasks and skills which are important to it, enabling them to seek education and training that delivers the skills and qualifications for a job they are interested in. Information plays a central role in linking supply and demand, minimising 'noise' in the labour market by promoting a common language among professionals, job-seekers and employers. Information on skills and qualifications also covers, across sectors and regions, the different drivers of demand for skills, critical occupational mismatches, the localisation and attractiveness of job vacancies, and trends in automation.

**Good information is accessible, credible, timely, readable and focused on its users' needs**

### **Good information is not always accessible everywhere**

While there has been progress in many countries and regions, career guidance professionals, learners, employers and policy decision-makers in our partner countries continue to experience a lack of useful information and insight on skills, qualifications and changes in the labour market. Most partner countries have invested in the capacities and standards of statistical services to collect, manage and publish data – a core part of credible labour market intelligence. Data from labour force surveys, institutional surveys and, in some cases, special surveys dedicated to the transition from school to work, is available in most partner countries. Web sites of statistical services are also increasingly open to sharing datasets with researchers and stakeholders.

One of the main purposes of national systems is to anticipate overall skills need, and better match the supply of skills and qualifications with the demand expressed by employers and labour markets. Other research groups carry out regional surveys of employer demand for skills and offer analysis of skills mismatch based on statistical indicators. However, this is not always enough to generate the future-oriented labour market intelligence needed for skills anticipation and matching, nor to mediate and disseminate the results of intelligence for people's needs. Skills anticipation and matching is more than just the collection of data from regular statistics and administrative registers. It is the result of a combination of three functions. First, knowledge creation, which includes the collection and analysis of data and its interpretation and integration. Second, knowledge mediation, which covers sharing skills intelligence with end users. And third, knowledge application, which includes making policy aimed at improved skills matching. The effectiveness of this combination is often hampered by unclear allocation of roles, poor collaboration and dialogue, and scarcity of analytical capacity. As in any system, recognising how well the different parts are functioning helps you decide where most efforts are needed for improvement. How might your national system allow you and your colleagues to contribute to better collaboration and dialogue? And are there opportunities for you to get involved in creating and applying knowledge for skills anticipation and matching, as well as sharing it?

### Labour market intelligence is undergoing digital transformation

Digital technologies are driving the rise of big data in labour market intelligence, the growth of open education resources and modalities, and, more recently, 'digital credentialing'. Real-time, highly-detailed information on the dynamics of skills and qualifications is starting to make a big difference to the functions of skills anticipation and matching outlined above, and to other areas. Big data is all around us, and it can be used to complement and go beyond conventional approaches to labour market information systems, adding value to established statistics in the process. Conventional approaches based on surveys are affected by issues of cost, timeliness, accuracy, usage, integration and coverage. These can all be addressed if stakeholders work in partnership, particularly governments and international donors. The growing diversification of data sources enables a depth of intelligence concerning skills and occupations that could not be captured before. Big data for labour market information systems combines elements of wider transformation drivers, including machine learning algorithms, the use of large volumes of internet data, and specific computing architectures. These techniques and data sources continue to evolve, but they are already changing the way people find and use information on skills, qualifications, occupations and jobs. Digital transformation is also responsible for the emergence of online platforms for data-driven intelligence and guidance on careers, jobs and skills. These systems and sub-systems often lack interoperability (that is, the ability to 'talk' to each other), but technical and non-technical obstacles can be overcome through collaboration and sharing of good practice. And while the rise of big data offers many benefits, calls are growing for greater protection of privacy, and for checks on the veracity and value of data.

#### Georgia Job Compass enriches labour market information

Everybody agrees we need to know better which skills employers require for which occupations. But it's easier said than done. Why not tap the large volume of job vacancies and enrich the Annual Labour Market report? In 2018, the Georgian government's Division of Labour Analysis joined forces with private agency HR.GE to collect, analyse and structure job vacancies 2012-2017. The resulting Job Compass is available online for users. [www.lmis.gov.ge](http://www.lmis.gov.ge).



### **Digital ecosystems in skills and qualifications**

As noted in the Introduction, the idea of a skills ecosystem is gaining traction, with information on skills and qualifications seen as an essential component. At the same time, most of our partner countries are implementing e-government projects in response to increasingly digitally-connected 'smart' cities and regions. There are social and economic benefits to be gained by improving connections between the different domains of policy, technology and human capital. This offers new possibilities for addressing issues that have long affected collaboration and sharing within the wider lifelong learning environment. Gathering information and extracting intelligence on trends in skills and occupations across sectoral, national, regional and global labour markets requires data from different sources and analytical structures. Such a combination goes beyond the capacity of any single ministry, agency or research body, let alone a careers guidance centre or public employment service. The integration and interoperability of e-government systems represents a key enabler of 'smart' government. Ever-faster computing power and artificial intelligence can be harnessed to offer more integrated and coherent information on skills, qualifications and labour markets. But technological, social, political, legal and organisational barriers to the interoperability of different systems prevent governments from achieving maturity in 'smart' projects.

### **Information in the skills ecosystem**

There are several main types of information sources within the skills ecosystem. We'll look at sources close to skills development, in the shape of qualifications frameworks and databases, and competence frameworks, before going on to consider occupational profiles and job portals, which are closer to the labour market. But first, who are the users of information in the skills ecosystem, and what are their requirements? End users of information are all different. The needs of employers differ from those of employees, job seekers and learners, placing high expectations on career and employment



counselling services. For individuals, whether they are learners, workers or job seekers, skills and qualifications act as a portfolio of intangible assets, with a value that rises and falls depending on how well they are used, mixed, upgraded, represented and made visible. The information needs of individuals vary according to circumstances, but they all need readable information that is accessible through their preferred communication means and responsive to their specific situation. Individuals have many questions when it comes to skills and qualifications, such as what and where to study after secondary education, which programmes and qualifications offer the best prospects, and how to acquire the skills to manage their own path in learning and work. Employers need timely, detailed information specific to their location and industry. They will ask questions about the skills factors that affect the organisation of work, improve productivity and maximise the use of technological infrastructure. They will want to know whether to invest more in automation, and if so what that might mean for the skills profile of their workforce. And they will keep a close eye on the competitive environment, particularly in terms of what other companies in their sector are doing about skills, and where they might be getting advice and support from. Service providers and intermediaries, such as professionals in career guidance, counsellors in employment or recruitment services, youth counsellors and managers of education and training providers, are mainly interested in sources of real-time, detailed and reliable information on the labour market to improve the quality of their services. If you are among this group of professionals, you might want to know how to package, present and disseminate information so that it is attractive, accessible and useful; how to measure the effectiveness of careers guidance; and how to continuously renew and improve the quality of information for career and personal development. Questions like these need timely, credible and effective responses based on accurate information that is effectively communicated. This is most likely to be provided within the skills ecosystem.

## Scotland

### Widening talent pools with a qualifications framework

In 2019, the Scottish Qualifications Authority sought new ways of engaging employers and increasing awareness of their qualifications framework. The message was simple: use qualification framework levels in job adverts to widen your pool of talent and open doors for people who may not have mainstream academic qualifications. Many real cases at: [www.scqf.org.uk](http://www.scqf.org.uk)



### Qualifications frameworks and databases

Recent developments in Europe show that qualifications frameworks are beginning to contribute to the transparency of available qualifications, enabling greater stakeholder engagement. They can also encourage people to value learning by making learning outcomes from informal and non-formal learning more visible, and help identify barriers that prevent learners from moving between different pathways and systems. Qualification frameworks and databases are important elements of the skills ecosystem, as they can help to link subsystems, but they have not yet fully delivered their potential added value. Steps in the right direction include the development of qualifications portals and the use of national qualifications framework (NQF) levels on certificates and diplomas, which help to make information about qualifications more visible for users and other labour market actors.

The contribution to recognition of qualifications across countries is at an early stage. The bridging function of NQFs, in defining the relationships between the learning outcomes obtained in different places and types of providers, requires continuous reflection and feedback. Growing critical scrutiny has highlighted the lack of visibility of qualifications frameworks to users. Agencies in charge of NQFs have therefore been developing tools to improve communication and service provision to users and stakeholders. Several instruments have been developed to improve the connections between, and transparency of qualifications. Qualifications registers, for example, are online databases of qualifications managed by competent national bodies or sometimes by regional or international entities. There are also online platforms for career information and guidance, containing links and information on qualifications, new digital technologies to manage credentials, multi-media content on qualifications tailored for users, and infographics about NQFs as a whole or in specific dimensions.

The 39 countries involved in the European Qualifications Framework (EQF) have been developing and populating digital qualifications databases or registers and communicating them via dedicated platforms, or via NQF websites. ESCO, the European multilingual classification of Skills, Competences, Qualifications and Occupations, offers detailed information on more than 9,000 qualifications from nine EU Member States. This catalogue of qualifications forms one of ESCO's three 'pillars', the others being occupations and skills/competences. There is significant value for users to be found in such a large database of qualifications, which spreads across the eight levels of the EQF and all fields of education included in the International Standard Classification of Education (ISCED).

### **The digital transformation of qualifications**

Recent UNESCO research highlights new opportunities and challenges for qualifications systems in the digital transformation of learning. The emergence of fourth-generation qualifications frameworks are questioning established policy principles. These new frameworks include non-degree credentials and new learning domains such as global citizenship, and the application of new digital technologies to recognise outcomes of learning and credentialing. Traditional degrees, or 'macro' credentials, are no longer the sole representation accepted by employers and others to value and recognise the knowledge, skills, attitudes, competence, autonomy and responsibility of graduates and learners. UNESCO underlines the growing role and value of new types of credentials. They tend to be smaller ('micro' credentials), which can be combined (or 'stacked') to form broader qualifications, and are verified and managed via digital frameworks and instruments. The new Europass aims to offer the possibility of 'digitally signed' credentials or 'badges'. Digital credentials that use badging have a number of benefits. They offer fine granularity of information about the demonstrated skills, and can

### **Montenegro An online national qualifications framework for everyone**

Learners and employers can find detailed information on specific qualifications of different types and levels on the Montenegrin Qualifications Framework (MQF) website. The site makes information available to all, helping to answer key questions such as which methodology should a new sector qualifications committee apply, which new qualifications were recently approved by the Qualifications Council, or how should teachers explain what the MQF is (there's a publication and a video for that!). Much is being added, but a lot is already there, for all. <http://www.cko.edu.me/default.aspx>



**There is a growing consensus that agreeing on definitions of skills and competences is important**

be combined with other types of credentials. They can also provide personalised and accurate information on the holder's achievements, and are machine readable. Finally, because they are recorded in databases, they can be used for in-depth, real-time analytics, based on open technical standards. The Europass framework for digitally-signed credentials is based on the principle that qualifications are a public good. Therefore, Europass promotes user-centricity, inclusion and accessibility, openness, data protection, interoperability, transparency, resilience and reusability. However, the drive for mass



use of digital badges is not risk-free. There are issues of security, quality assurance and transparency, user perception, and internet access. However, the use of new digital technologies to manage qualifications and validated units of skills acquired through lifelong learning is spreading rapidly. This can benefit both young and adult learners. But is this happening in your immediate environment? How widespread is awareness of these new types of credentials? Do you anticipate them playing a big part in your national or regional system?

### **Competence frameworks**

The meaning and content of specific skill sets are often characterised as competences. It is important to understand the competences required for particular jobs or types of occupations, and the same is true for the abilities, traits and attributes that support successful performance of the skills in question. However, education and training providers, curriculum developers, qualifications authorities and those dealing with job descriptions and skills audits in companies have different priorities when it comes to competences. What differentiates soft from transversal skills? How can technical job-specific skills be linked with general knowledge, key competences and individual autonomy and responsibility? What is the concrete definition of the ability to “adapt to change”, the skill most requested by employers, according to an analysis of online job vacancies in 18 EU countries published in 2019? How can in-demand transversal skills like this be acquired? And are they fully part of the learning outcomes of formal education and training programmes in initial VET? National and international institutions have been developing skills and competence frameworks to provide well-structured responses to these, and other questions. Competence frameworks are supported by tools such as detailed handbooks and definitions available on dedicated online portals and platforms. There is a growing consensus that agreeing on definitions of skills and competences is important so that the general development of human capabilities can be consistently described. This is illustrated by the spread of competence frameworks and taxonomies of skills and occupations, and by the development of mechanisms and platforms for matching



**With the global focus on climate change, knowing how to act sustainably has become an urgent factor**

labour market supply with demand.

The EU has adopted competence frameworks and associated tools for digital skills and entrepreneurship competences, while UNESCO (Asia-Pacific) and the Council of Europe have adopted frameworks for transversal competences and democratic culture, respectively. The EU Council Recommendation on key competences for lifelong learning, revised in 2018, aims to reach out to the wider public by providing “a European reference tool for policy makers, education and training providers, educational staff, guidance practitioners, employers, public employment services and learners themselves”

The eight key competences of the Recommendation are: literacy; multilingualism; science, technology, engineering and maths; digital; personal, social and learning to learn; citizenship; entrepreneurship; cultural awareness and expression. These are necessary to ensure basic skills, personal fulfilment, active citizenship, social inclusion and employment. They are both an expression of fundamental human rights, and part of the EU’s vision for a European Education Area in which education and culture are drivers of job creation and social equity. The fifth key competence — ‘personal, social and learning to learn’ — is defined as “the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one’s own learning and career.” It also includes the ability to learn and work both collaboratively and independently. How to organise and persevere with learning. How to evaluate and share learning. When to seek support, and manage career and social interactions. Additionally, individuals should be resilient, able to cope with uncertainty and stress. The implication for learners is that, by developing this competence, they become able to reflect upon themselves, deal with complexity, critically reflect on challenges and make effective decisions. Are learners or job-seekers in your setting demonstrating these key competences? Are these competences included in day-to-day activities and programmes? As a professional, do you feel you have the training and support required to reflect on your own situation, effectively manage time and information, work with others in a constructive way, remain resilient and manage your own learning and career?

### **The growing importance of green skills**

With the global focus on climate change, knowing how to act sustainably has become an urgent factor in almost every area of learning, skills and employment. And although climate change mitigation measures may cause short-term job losses, recent reports suggest moving to a fairer, more sustainable economy offers potential for job creation and the promotion of decent work. However, there is not yet enough awareness or understanding of the knowledge and skills needed to live in, develop and support a society which can reduce the negative impact of human activity on the environment. Along with employers and learners, your roles in lifelong learning and lifelong guidance are likely to be increasingly affected by the features of and demand for 'green' skills. Cedefop has produced a glossary of terminology in European education and training policy, which proposes definitions of green skills at different levels of complexity. For example, generic green skills help to develop the implementation of resource-efficient activities and promote 'eco-citizenship', while more specific green skills are required for standards and processes that protect ecosystems and biodiversity, and reduce the consumption of energy, materials and water. Highly-specialised green skills are required for technologies such as renewable energies, sewage treatment or recycling. In 2017, Cedefop and the ILO updated their 2010 analysis of good practice in green skills within the EU. The update examines recent changes in green jobs and employment, and analyses regulations and policies supporting green skills and employment, including the surrounding institutional set-up and the role of social partners. It also highlights good practices, including green skills anticipation mechanisms, relevant vocational education and training and higher education provision, the role of the private sector, and active labour market policies and retraining measures. But more needs to be done, and your contribution to the development of green skills will be just as important as it is to the skills and qualifications ecosystem as a whole.



## Occupational profiles

We now turn to information sources closer to the labour market, starting with occupational profiles. Occupations are the engine of labour market and skills demand. Occupational profiles, based on an agreed taxonomy and set of terms, act as a common language between the labour market and education and training systems. Most countries have renewed their occupational classifications, bringing them into line with international agreements such as the International Standard Classification of Occupations (ISCO), and have made efforts to develop occupational profiles at national or sectoral levels. The range of approaches to developing occupational profiles reflects differences in labour markets and the organisation of work, policy priorities and objectives, stakeholder interests, and the internationalisation of business and supply chains.

There are varied sources of information on occupations and occupational profiles, more or less tailored to specific institutional users such as job centres, or aimed at the wider public. These include ESCO, and the US-based Occupational Information Network, or O\*Net. While ESCO is a taxonomy, O\*Net is a comprehensive occupational and labour market information system, including a self-assessment process for learners. As noted earlier, the growing application of big data techniques to large volumes of online job vacancies allows fine-grained analysis of skills and how they interact with occupations. Big data's potential in the field of labour market information can be exploited to support the renewal of existing occupational profiles, offering more accurate information about how jobs are developing.

## Job portals

Job portals have rapidly become self-service instruments. Online job vacancies form a large and varied source of data on employer skills demand, while advances in web crawling techniques and machine learning have transformed the vast amounts of web-based data into a new source of labour market information capable of providing

### **Belarus** **Multiple portals for job vacancies**

Employers and job seekers benefit from diversification of information sources on job vacancies. The Belarus Republican Vacancy Database displays the largest number of vacancies and the smallest number of candidates. Information on the tasks and skills required is more refined in vacancies published by the larger private portals. Competition for skills is visible in career guidance portals of technical universities too.



granular, almost real-time skills analysis. Online job portals are accessible in most countries, and the more effective portals have options such as filtering results by date, mobile app compatibility and daily email alerts. Other valuable features include the number and quality of listings, timely and relevant search results, easy-to-use interfaces and efficient search algorithms. The spread of job portals is also apparent in many of our partner countries. An ongoing study in Tunisia and Morocco identified at least 16 job portals in each country. A new pan-European system for online vacancy analysis will be fully operational by the end of 2020, with results visualised in almost real-time on Cedefop's dedicated online platform. Early results from pilot analysis in seven EU Member States show the advantages of this model, and Cedefop has published accompanying papers discussing both the outstanding issues and the planned steps to enhance quality and reliability of the data and associated machine learning. Cedefop has already published a comprehensive overview of the features and trends of the online job market, filling an important gap in the available information.

Online job vacancies in Europe now cover all occupational groups and levels of qualifications, although vacancies in some sectors and occupations tend to remain over-represented. The pan-European analysis shows the potential to add clarity on key questions, especially if combined with other sources. For example, in which sectors, occupations and locations is demand increasing? What profiles are employers seeking to recruit against in the most in-demand jobs, and how does this vary across countries and sectors? What are the demands for specific skills in specific jobs, and how do they vary across countries and sectors? Which new skills are most in demand, and in which jobs? Cedefop's analysis shows that the highest added-value information in online job vacancies is the description of employers' requirements for jobs, and associated skills. Although these vacancies rarely specify a full job profile in the vacancy, the listed skills can be considered as indicative, and are critical for

selection and recruitment decisions. However, the value-added that all these tools can offer is only as good as the ability of learners and job-seekers to make use of them. We turn now to how you, as the dedicated professionals, can help them develop that ability.

### **Lifelong guidance: Making modern careers manageable**

As we have seen, information on skills and qualifications is not in shortage, but is in transformation. It is not equally available everywhere, but in general the volume that already exists is like a torrent – a rushing, abundant and unceasing stream. Learning to navigate that torrent to find what is useful and reliable is a challenge, especially for people with low levels of readiness for career decision-making, including those who lack fluency with digital communication, or have difficulty accessing conventional guidance services. People of all ages and abilities need careers counselling, at different stages in their education and in their working lives. In order to provide them with the best advice, you need up-to-date information, while they need to know how to apply that information and guidance to the management of their own careers.

### **Career management skills**

Defining career management skills offers us two important pieces of the puzzle concerning how people know about skills and qualifications. First, we need to distinguish the content from the process. What do individuals need to know about themselves and about opportunities in education and the labour market to make well-informed decisions? Second, we must understand how individuals each construct and implement their own 'life project'. The European Lifelong Guidance Policy Network defines the content of career management skills as "a range of competences which provide structured ways for individuals and groups to gather, analyse, synthesise and organise self, educational and occupational information, as well as the skills to make and implement decisions and transitions".

### **Armenia**

#### **A career is more than just a job**

Armenia has a career guidance system that targets learners in all sectors of education, and also workers and adults using employment centres. The Armenian experience demonstrates that a sustainable career guidance system takes time to establish. Beyond methodology and capacity development, trained counsellors need to be embedded and given visibility to reach the users. The "Career guidance and capacity development centre" is available at: [www.mycareer.am](http://www.mycareer.am)



They go on to identify career guidance for the employed as covering “learning activities and products that enable them to take stock of their present work situation (role, conditions, content), the competences they have acquired from work and life-wide learning and their validation, and to plan further learning and work transitions and life-wide transitions such as retirement.” These learning activities can take place within enterprises, as part of a human resources development strategy, or as part of trade union programmes.

### **Careers education and the acquisition of career management skills**

Careers education refers to a range of pedagogical services, structured programmes and activities linking students’ learning to lifelong career management and employability skills. These programmes promote critical reflection about the world of work, and awareness of opportunities for further learning or training. Some programmes prepare students for work, and emphasise adaptation to the world as it is, while others encourage an active role in shaping the future of work. Promoting career decision-making and career management skills is one of a range of lifelong guidance activities, along with informing, advising and counselling. Career learning and exploration can take place in groups, or as a dialogue between individuals. The most comprehensive approach to careers education in schools is to include it as a stand-alone, but with strong links to the vocational programme. As we stress the need to develop modular curricula in part 3, ideally careers education would also be incorporated in these modules.

Careers education and counselling require specific skills, teachers will need appropriate training to be able to fulfil this role. Careers education can also be delivered through a series of themes taught across the curriculum, or via extra-curricular activities such

as careers fairs, workplace visits, work experience programmes, or employers visiting schools. These opportunities can help students think about the links between their studies and the world of work.

Careers education programmes can be delivered by careers teachers, or by external practitioners based either inside or outside the school. A third model, in the form of a partnership between school-based and external staff, links curriculum content to more in-depth, up-to-date knowledge. It is also important to take individual students' personal, cultural and other demographic characteristics into account, and, when appropriate, refer them to other services. Careers education or guidance works most effectively when various interventions are combined and sequenced programmatically, and there are both curriculum- and work-based pedagogical methods, in addition to careers guidance services. The involvement of employers and working people in work-based experiential learning is critical for an individual's career learning. A 2016 study by Cedefop recommends associating career management skills programmes with labour market information and intelligence. The quality and provision of such programmes should be addressed at policy level, but the implementation is, again, where you make the vital contribution.

### **The role of employers and employment services in lifelong guidance**

The labour market, as described by employers and by public and private employment services, is a significant source of information about employment trends, and on emerging and declining occupations. This kind of information is critical for informed career decision making. Public employment services and their private sector counterparts are the key institutions in providing counselling and guidance to job seekers. We also want to highlight

the crucial roles of employers and, increasingly, of information and communication technology in education. This is not to suggest that lifelong guidance is split between guidance in education and guidance after education; it is – or should be – a continuous process. Careers guidance has traditionally focused on informing individuals about the world of work and career opportunities, and supporting them to enter the labour market. Career guidance activities happen within enterprises, as noted above, but are more likely to be delivered through a national careers service, or through the public employment service, specialist careers services or private providers. For employers, lifelong guidance is a major tool for human resource development, for maintaining a high level of productivity in the workforce, for attracting, motivating and retaining good-quality employees, and for matching the skills levels of staff with forecasted need. Employer engagement in careers guidance typically includes activities such as jobs or careers fairs, presentations and networking sessions, work experience placements, mentoring and job shadowing. Employers also provide information on current and projected demand for skills and competences, to help shape the supply of skills and labour. In the future, careers guidance could be transformed into a service which supports not only individuals, but also the development of enterprise-wide competence and competitiveness. Ideally, this would see lifelong guidance developed in closer alignment with employers, but there obstacles remain to engaging employers to support and invest more in careers services.

### **The role of ICT in lifelong guidance**

Over the past few decades, information and communication technology (ICT) has become an increasingly common part of careers service provision. In this context, ICT refers to electronic products, networks and content used to inform policy and systems and to deliver services, resources and tools. This includes the way these tools are designed and developed, how they are used, and how

that use in turn affects future design. ICT can also be used to refer to an individual's competence to use digital tools in lifelong guidance. The experience of professionals in using technology varies considerably. Some remain unconvinced of its relevance for careers guidance, while others lack the skills or confidence to use it effectively. However, both the professionals and the ICT tools themselves (that is, digital devices, database systems, interface management, and so on) play an important part in the design and delivery of online careers development services. To consider the usefulness of existing and emerging technologies, we need to understand the general goals of careers services. We have to identify the objectives of guidance and counselling, and establish how theoretical frameworks are used in existing careers-related ICT services, or how these frameworks can be embedded in the design of ICT services.

One of the main goals in integrating ICT in training programmes for careers professionals is that you get to use ICT in practice, and integrate this with supporting your clients or students to use the technology themselves. The right training helps to make you aware of the various ways in which technology functions in the careers field, and to reflect on the differences between your current understanding and a more advanced level that you may already, or may need to, be moving towards. The general use of ICT by an ever-growing proportion of the entire human population is perhaps the defining trend of the 21st-century (so far, at least). Learners, job seekers and workers are increasingly able to obtain information about skills, qualifications and careers without the intervention of a professional. At the very least, many will be able to inform themselves more effectively before engaging with you. Without a commitment to regularly updating your own ICT skills, there is a risk that your skills could be outstripped by those of the people you intend to help.

# **Part 3.**

## **How do people acquire skills and qualifications?**

**Pedagogies**

**Curricula**

**Teachers and trainers**

**Continuing professional  
development**





## Part 3.

# How do people acquire skills and qualifications?

**Skills are acquired through learning, a process in which individuals engage with and internalise knowledge and skills, and develop competences to solve problems. Learning can be formal, as well as informal or non-formal.**

Non-formal learning is structured learning that takes place outside a formal learning system, for instance introducing a new work process within a company. Informal learning is unstructured. Human curiosity makes learning an everyday activity, so learning starts before and continues after school, occurs through social interactions and private reflection, and happens within and outside the workplace. Lifelong learning is about individuals pursuing their own knowledge and skills development, whether for career or personal reasons, or both. Many people pursue lifelong learning to improve the quality of their life, sharpen their skills, gain new qualifications or upgrade existing ones. The decision to obtain skills can be motivated by different needs. For instance, there may be a need to learn something for the first time, or to learn more about a previous subject of study. Or there may be a need to apply in practice concepts learned in theory, or solve an immediate problem, or adapt to a particular change. There are no one-size-fits-all solutions that suit every learner, because different preferences and talents shape the way people learn. Understanding these needs and preferences helps identify the learning style best suited to achieve the right learning outcomes.

Learning outcomes are statements defining the learning that must be achieved and reliably demonstrated by learners at the end of a course. They describe what a learner is expected to know, understand, and be able to do as a result of having done the course in terms of competences, rather than in terms of the content that the learner has to acquire. As noted in the fourth edition of The

### United Kingdom Experiential learning for higher vocational qualifications

Leeds Trinity University in the UK offers Degree Apprenticeships for young employees. The programmes, co-designed by employers and taught in partnership with industry experts, allow young professionals to combine workplace learning with university studies and acquire a Higher Education Certificate or Bachelor's Degree. The apprenticeships are particularly attractive to non-traditional learners, which helps to widen participation in higher education. See more: [www.leedstrinity.ac.uk/courses/apprenticeships](http://www.leedstrinity.ac.uk/courses/apprenticeships)



Global Inventory of Qualifications Frameworks (2019), “learning outcomes underpin most European education and training systems, as well as those in many other industrialised countries around the world. Further, they are making significant inroads in developing or transition countries, from the European Neighbourhood of Eastern Europe to the Southern Mediterranean, Africa, Asia and the Pacific.”

Qualifications serve to testify that a person has acquired learning outcomes, verified through assessment. Qualification standards are used to describe the skills a person should acquire and to assess and certificate individuals. They are often developed on the basis of the concrete needs of the labour market, as formulated in occupational standards. By making the learning outcomes in qualifications transparent, it becomes possible to compare and link qualifications. This is a key point for NQFs that organise qualifications on the basis of learning outcomes. Qualification standards focus on assessment and certification, they are not normally used to prescribe the content of the required learning. Qualification standards can facilitate the recognition of formal, non-formal and informal learning, and support alternative pathways that are adapted to the needs of learners and local contexts. Assume that national qualifications frameworks are in place, and that qualifications have been developed and/or linked to them. How do we then ensure that people benefit from the establishment of these frameworks? How do we deal with other challenges, such as the continual introduction of new technology which changes the way we work and live? How can we organise the learning process in a meaningful way? And how do we move from intended learning outcomes, to actual learning? These questions are linked to the development and uses of curricula, which pedagogies are used, and how teachers are trained. These are all areas affected by the global changes we discussed earlier, and your awareness of, and reactions to the consequences of change are crucial for the success of your learners.



### **Learning for life: New approaches to the curriculum**

In both formal and non-formal learning, study programmes and training courses are the means by which young people and adults alike acquire their desired qualifications. The content of a study programme is determined by a curriculum, a written plan for learning consisting of a set of learning outcomes translated into learning goals, one or more learning and teaching activities, and materials organised in a way that is consistent with the goals and activities. But many of the old certainties about curricula are facing significant challenges.

**The ideal blend, especially in vocational training, consists of at least three aspects: learning at school, learning in the workplace, and technology-supported learning, which is often online.**

### Flexible curricula

VET curricula have become more flexible in order to meet changing labour market demand. Parts of a curriculum can be adjusted to meet the most up-to-date market demands, and curricula can be designed so that students can choose different pathways to achieve similar learning outcomes. One way to create a flexible curriculum is by using a modular design. A modular curriculum consists of building blocks based on learning outcomes that can be offered several times a year, and can be combined in different ways. Each building block can be adapted to specific labour market needs. A modular approach can encourage interdisciplinary working, because modules can sometimes be used for different programmes, allowing students from different programmes to participate in the same module. The learning outcomes in a flexible VET curriculum are often based on the tasks learners need to be able to perform at the end of the programme. This means knowledge is no longer the leading aspect in curriculum development. Instead, the development process starts with identifying the tasks which learners need to master. In turn, this guides the knowledge, skills and competences the learner needs to perform those tasks. Current approaches to learning require the necessary knowledge, skills and competences to be acquired in an integrated way. A modular approach is useful in this regard, as modules can be designed around a specific task, or set of related tasks, integrating knowledge, skills and competences. A modular approach makes it easier to adjust to labour market demands. Based on new needs, modules can be added, or deleted if they become obsolete. This, in turn, creates the need for flexible qualifications based on sets of learning outcomes that can be assessed and certified as qualifications or parts of qualifications. Finally, a modular curriculum can be presented in two layers. The first layer offers an overview of the different modules and, often, the time allocated to each module. The second layer will often provide a more in-depth description of the module in terms of assessment criteria, the form the assessment takes, the learning objectives, the content and activities for the classes, and the materials and environment required. The module should also clearly describe the teacher's role, and the preferred pedagogical approach.

## Curricula and learning

A curriculum cannot exist without one or more pedagogical approaches, because they inform the activities through which the curriculum is delivered. Choosing the right pedagogical approach is therefore part of the curriculum design process. Instructional science distinguishes between three main theories; behaviourism, cognitivism and constructivism. In the constructivist model, learners actively construct knowledge with the support of a teacher/trainer or coach, instead of passively consuming knowledge. For that reason, there is a general assumption that the constructivist approach is more effective than traditional lecturing and instruction alone. There are many styles of constructivist teaching and learning, but they all recognise the importance of the different backgrounds and interests of learners. They also incorporate widely-known methodologies such as experiential learning, building on learner differences through differentiated instruction and encourage social and collaborative learning. The use of blended approaches, in which different locations and activities are combined, is growing.

Sometimes the resulting blend is limited to a combination of learning at school and through online or other technology-supported activities. The ideal blend, especially in VET, consists of at least three aspects; learning at school, learning at the workplace, and technology-supported learning which is often, but not always, online. This three-way blend should support individual, collaborative and directed learning. The challenge is to ensure that learning happening in one place is carried over smoothly to the next. Wherever the learning activities occur, they should be related to, and support, each other.

However, the use of technology itself is not the aim. Instead, the intention is to enable learners to achieve the learning outcomes. Finding the blend in which the chosen pedagogy and technology fully support the learning process is your task as teachers, curriculum developers and professionals in related areas. The

### Kazakhstan

#### **Accept, understand and apply: Motivating students to learn maths**

All students have mathematical skills, but many lack confidence and interest. In order to raise interest, teachers need to make the topic accessible and useful for pupils. The second step is to individualise the programme for each student, developing associative thinking. The third step is to apply the skills obtained in a project chosen by the student. The principles for activating students were developed by Alena Lyubchenko from Kazakhstan



### **Estonia** **Community days for seniors**

Care worker students at Tallinn Health Care College in Estonia organise community days for seniors. The students prepare and present topical information to seniors of their community. Typical topics include health promotion for seniors, assistive devices and how to manage someone with dementia. The students also do the marketing for the event, arrange the room, welcome the seniors and moderate the day. See more: [www.ttk.ee](http://www.ttk.ee)



desired learning outcomes and related content and learning activities should inform your decisions about whether to use technology and, if so, what technology to use. Besides blended learning and the use of technology to support learning processes, current pedagogies focus on experiential or authentic learning, and social and collaborative learning. The workplace is one of the best environments to deliver these types of learning. It's an authentic environment in which to learn specific tasks, often supported by, or working with, colleagues. However, when a workplace is used as a learning environment, it is important to make sure that the learning is linked to what happens in the classroom, to reinforce the learning at each place. Unfortunately, it is not always possible to organise workplace learning, or it may be possible but only for a limited part of the programme. Therefore, it's a good idea to look at other ways to create authentic learning situations that support collaborative learning. The emphasis on 'authentic' here refers to meaningful learning opportunities, in which learners immediately understand why they have to acquire specific skills and knowledge, and in which they can apply the skills and knowledge. It is also about providing a learning environment in which learners can learn by experience, where they have the opportunity to find out how something works by trying it themselves. A well-designed, authentic learning environment provides immediate feedback on how well learners perform. There are different ways to create meaningful and authentic learning environments. Examples include simulations, projects based on 'live' issues or tasks, and creating a real context at a school, such as a programme in which students become cooks running the kitchen of the school canteen. You can find many valuable tools among the wide range of new pedagogies being developed and implemented.

### Putting new pedagogies and flexible curricula into practice

Adopting modular curricula, delivering experiential learning, and integrating new technologies are all generally seen as desirable. However, these methods require more knowledge and effort on the part of teachers and curriculum designers than traditional approaches that focus on teacher-centred delivery. The challenge of these more learner-centred approaches for you as professionals is that they require a shift in mindset. This change in mindset applies not only to professionals and policy makers, but also to students and parents as well, who may need time to get used to the new styles of teaching and learning. Besides a shift in mindset, which takes time, there are other barriers that might hamper the development and implementation of flexible modular curricula. Traditionally, theory and practice are segregated in the VET curriculum, and one of the biggest challenges is to rethink the curriculum in a more integrated way that mixes theory and practice. This applies both to designing as well as to delivering modular curricula.

Moreover, implementing new pedagogies requires teachers to fulfil new roles. First of all, flexible curricula are often developed locally, so there needs to be sufficient expertise in curriculum development at that level. Creating more authentic, meaningful and blended learning environments often requires more than a simple classroom, requiring appropriate budgets and facilities. In these new pedagogies, real experiences play an important role and work based learning is a good way to provide them. However, it can be difficult to organise work based learning in a systematic way, especially in countries or sectors that rely on small businesses and enterprises. Both Initial and Continuing VET are part of the education and training system, and there are different pathways to programmes at different levels of the system. In countries where

#### Serbia

#### Student wine wins gold

Students on the viticulture and winemaking course at the School of Chemical Technology in Subotica produce their own wines, taking part in all stages of the wine making process, from harvesting and processing the grapes to bottling, quality control and marketing. As the school does not have its own vineyards, it cooperates with partners who offer their vineyards and wineries as training venues. The final products have been awarded top prizes in national and international wine competitions. See more: [www.hts.edu.rs](http://www.hts.edu.rs)



general education (i.e. focused on subjects) covers a big part of VET programmes it can be more difficult to shift from a subject-oriented to a module-based approach. Systems and policies have to be put in place to support new approaches. Although these and other barriers make it challenging to implement new curricula and pedagogies, the response to our call for success stories shows that many of you are already finding innovative ways to make subjects and programmes more meaningful.

Adult learning is often more advanced than initial vocational education in using flexible new approaches and individualised modular provision. In adult learning, the work of the trainee is sometimes considered as part of the learning thereby reducing time taken from work for training, which employers like. E-learning is gaining popularity for the same reason.

### **How to develop curricula**

This brings us to the important question of how to design and develop flexible modular curricula based on new pedagogies. In general, the process can be the same as for subject-oriented curricula, but as the learning outcomes and desired pedagogies differ, the final outcome (that is, the curriculum itself) will be different. When talking about the curriculum design process, it does not matter whether the curriculum is being designed for young or for adult learners. Curriculum design is a systematic process, often starting with an analysis of current and desired situations. Based on this analysis, design principles are formulated leading to the design and subsequent development of the curriculum. One of the first questions concerns the level at which the curriculum will be designed. In general, there are four curriculum development levels: macro, or national; meso, or regional; micro, or classroom; and nano, or the level of an individual learner. The content of a specific programme is usually developed at macro or meso level. Developing



curricula at meso level allows schools to make adjustments based on regional labour market demands. Another approach is to develop a core curriculum at macro level covering learning outcomes that are less prone to changes in labour market demands, as well as allowing an element to be adjusted at meso level which allows relatively quick responses to changing labour market demands. Monitoring and evaluation are also significant. During each step of the design process, it is important to check whether the design still meets the expectations and principles formulated at the beginning. During and after implementation, it is important to evaluate to what extent expected learning outcomes are met. It is also useful to take into account the different representations of a curriculum (intended, implemented and attained) during the monitoring and evaluation process. There are different inputs to take into account when developing a curriculum. In general, these inputs will be defined in the qualification for which the curriculum is being developed. Often, the learning outcomes defined in qualifications are not only based on occupational standards, but also include learning outcomes based on, for example, key competences.

Curriculum development is a collaborative process, in which those with a stake in the final results should be given the opportunity to participate. One way you can enable this is by holding a curriculum conference. The event can be organised around a set of questions or dilemmas, with stakeholders invited to discuss workplace trends, new pedagogies, expectations of the new curriculum and so on. These discussions could result in a set of defined learning outcomes, design principles, and desired pedagogical approaches used to inform curriculum design and development.



**What it means to be a teacher is subject to big changes**

A working group can then be set up to devise a coherent and aligned curriculum framework that meets stakeholder expectations. The result of the design process should be a written curriculum that teachers can implement. But, as we have already noted, what it means to be a teacher is subject to big changes.

**Teachers and trainers: Changing times, changing roles**

Teachers and trainers are confronted with many changes and often saddled with high expectations. This makes an already tough job even more challenging, and you need a supportive environment in which it becomes feasible to cope with change

and meet expectations. When we refer to ‘teachers and trainers’ in ETF partner countries, we normally mean different categories of professionals working in VET. There are trainers for adults, training centres for unemployed workers, and people teaching vocational practice in schools, while others teach the theory of technical and vocational education, and still others teach general education content in VET schools. Some countries have tried assimilating these different roles under common teacher and trainer profiles, so that they can be more flexibly deployed and attract higher status, but few ETF partner countries have specialised training institutions for VET teachers. The categories in most partner countries are similar to those in EU Member States, described by Cedefop as “teachers in VET schools and centres” and “trainers in companies”. The categories are hierarchical, with teachers of general subjects and vocational theoretical subjects normally requiring a higher education degree. Teachers of vocational theoretical subjects are often graduates of technical faculties, with or without specific pedagogical training. Practical instructors in school workshops often do not have a higher education qualification.

They are often graduates of VET schools themselves, with some practical experience. Trainers in companies rarely have any specific training to be a trainer, tending to develop their training skills on the job by supervising and mentoring new colleagues, apprentices or stagiaires. There seems to be a flaw in many existing systems that grants higher status to the teachers that are furthest removed from practical implementation by students. Yet the recognition of a greater need for work based learning makes practical instruction at least as important as theory. Whatever combination of title, institutional setting and relative status characterises your particular environment today, there are things you can do to prepare yourself, your colleagues and your learners for the future.

### **Georgia** **Sector associations** **in education and** **workforce development**

The Georgian Farmers Association (GFA) wants to enhance opportunities for work-based dual vocational training for young people, adults, inmates and students with special needs. The GFA is a member of the National VET Council, and participates in defining the qualification framework in the sector and at school level. The GFA also supports the establishment of public-private partnerships.



## Serbia

### Interdisciplinary week

The Polytechnic School in Subotica organised a week of interdisciplinary work the quality of learning through cooperative teaching and by integrating various school subjects and developing competences between subjects. Language teaching and a combination of vocational skills and topics such as art history were mixed. The cocktail of diverse contexts stimulates creativity among teachers and students and activates many cognitive processes, from classifying and shaping logical relations to questioning and hypothetical thinking. See more: [www.politechnिकासu.edu.rs](http://www.politechnिकासu.edu.rs)



### Rising to the challenge

Traditionally, subjects in the VET curriculum – and especially theory and practice – are segregated. One of the biggest challenges is to rethink the curriculum in a more integrated way that mixes theory and practice. Students love a mixed approach, because it makes theory more meaningful and they are able to contextualise their knowledge. However, a curriculum built on knowledge, skills and competences learned through an interdisciplinary approach is more challenging to deliver than traditional approaches. You may be used to a segregated way of working that allows you some autonomy to focus on your own tasks and not worry about what colleagues are doing. On the other hand, a mixed approach offers more flexibility to design learning programmes tailored to the needs of your learners, and apply innovative pedagogies and assessment procedures. Getting involved in the curriculum design process means you also need to act as a curriculum developer, but are you ready to do that?

In centralised systems, curricula are developed at macro level, and teachers implement them in their classrooms. In decentralised systems, curricula are developed at school and classroom level. Teachers co-shape the curriculum and therefore need stronger curriculum development skills. Modular approaches are often interdisciplinary, combining theory and practice more effectively and integrating more closely with the realities of the world of work. This requires subjects and domains to be linked, which demands close collaboration among teachers of general education, teachers of vocational theoretical subjects, practical instructors, and trainers in companies. With new pedagogies such as blended learning and experiential learning in authentic settings being introduced and tested, there is a rising imperative for you to take a step back as 'teacher'. Instead, the focus is on coaching students, to let them do the learning while you support them in achieving the desired learning outcomes. By working more closely with other teachers and trainers, within and between schools and in companies, you can exchange

experience and identify good practice. This might lead you to work across different locations, because learning doesn't only happen in school, but also at home, on the computer, and in the workplace. A culture of teamwork is necessary to achieve such co-operation and this requires yet more change, since you might currently deal mostly with your own priorities. It is also important to consider what stage you have reached in your career. Newly-recruited teachers can renew a school's ambition, by bringing in fresh ideas, technologies and theoretical knowledge. Mid-career teachers are able to test new approaches against perceptions of what is possible, and are more likely to be open to new technologies and accepting of the need to adapt. Experienced teachers who are convinced of the need for reform can play a big part in shaping that reform. They can lead teams within their own institutions or across different institutions, and have more design experience and institutional memory. However, teachers at the end of their careers might be more difficult to convince of the necessity for change in the first place. You probably know some who have ingrained teaching habits, may not be around to witness the full cycle of reforms, and are therefore more likely to challenge the rationale for change. It is important that all professionals are comfortable with the new roles they are being asked to fulfil. Many changes are happening simultaneously and they cannot – and should not – be imposed from above. A carefully phased approach is needed, as experience has shown that top-down reform is a recipe for failure.

### Getting ready for the future

Lifelong learning and flexible provision require professionals to make the journey from relying on existing experience to developing a positive, rational approach to new situations and new methodologies. But how can that be done? All too often, we see professionals who have limited autonomy, and cannot do everything they would like to. Or, they feel insufficiently prepared to do what is being asked of them. There seem to be three aspects that are important in becoming aware of what the future means for

### **Kazakhstan** **Young women:** **professionalism and** **leadership**

Marina Velikhanova developed a project to support young teachers (with up to five years experience) to become young leaders in education. Among other things, young teachers explored what they need to do to become successful, participated in workshops, competitions and olympiads, received coaching on modernising education, and participated in a business game. One of them went on to reach third place in a national competition.



professionals. First, understanding where the education system is heading in the future; second, being aware of your own position in relation to that future; and third, having a sense of how to get there. Understanding the future as part of explaining the content of reforms is a necessary step to help you understand how your practice will be affected. The focus needs to be on what future developments are about, and how they might be implemented, rather than on the 'why' and the 'when'. With the near-constant changes in technology, shifts in curriculum design and pedagogies, and labour market demand and policy cycle dynamics, all professionals in lifelong learning and lifelong guidance will have to be more versatile. This could mean that "professionals with new roles"; or whatever titles are used in the future, need different payment structures. That doesn't necessarily mean salary increases, unless salaries are not sufficiently competitive to attract the right level of talent and experience in the first place.

The obvious response, in terms of supporting teachers in particular to manage the transition to the future, is via continuing professional development. However, it is not just a matter of organising formal courses with national teacher training institutes, in which teachers are instructed on how to change their role. This kind of approach is bound to fail, as it often makes teachers opponents rather than implementers of change. As we've seen, teaching is moving beyond lecturing, beyond the mere provision of knowledge, and teachers are becoming coaches who support or facilitate the learning process. They must learn to incorporate ongoing innovation into their own practice, and gain up-to-date key competences if they are to 'activate' students to take control of their own learning.

Current systems for professional development in our partner countries mainly cover relatively short-term training events, whereas complex VET reforms require ongoing processes and methods. These can include, among many other things, 'train the trainer' courses, action research, communities of practice and e-learning solutions. In the



Netherlands, for example, the 'Leerkracht' (or 'learning power') approach draws on the latest thinking in education and training and a culture of continuous improvement that has led to successful change programmes in other sectors, such as health care.

The most effective approaches for continuing professional development are based on peer learning. After all, teachers are learners too. Peer learning focuses on collaborative methods in which everyone participates on an equal basis, for example, through teacher-led curriculum design teams, based on local communities of practice, which can identify learning processes and learning

**Teaching is moving beyond lecturing, beyond the mere provision of knowledge, and teachers are becoming coaches who support or facilitate the learning process**

## Albania

### Vocational teachers sharing practice online

Forty-eight vocational teachers from all over Albania dealing with thermo plumbing, have been exchanging experiences and teaching materials, including texts, pictures, photos and videos, through Facebook. Comments and opinions contribute to improving the documents and teaching processes. Joint dissemination workshops which included 170 teachers have helped teachers to advise one another.



outcomes used to develop detailed lesson plans. While one teacher gives a lesson, others observe and provide feedback, comparing plans to actual delivery. Practicality studies can help teachers translate outcomes into implementation, moving from what works in principle to what works in practice. Professional networks, whether face-to-face or online, are a particularly efficient way to learn and collaborate, but a recent ETF survey in the Western Balkans and Turkey suggests that only one-third of teachers in that region collaborate in any formal way with colleagues outside their own institutions. Even within institutions, different categories of teachers and trainers seldom meet to coordinate their input. This suggests a lack of mentoring schemes, in which teachers work with a related professional on a sustained one-to-one basis. Mentoring creates a safe space in which to share ideas, challenges, tools and instruments, which can help both to generate insight and avoid duplicating existing innovations. Many new teachers have an intrinsic commitment to improving their teaching through professional development, and more experienced teachers need to be empowered through continuing professional development and given related roles appropriate to their experience. It is also vital to bring teachers into closer contact with employers' realities. Effective continuing professional development is defined at grassroots level and should be closely related to training needs, improvements in teaching and learning, and better outcomes for learners and employers. Therefore, appropriate continuing development approaches are best defined at the lowest possible level. Informal continuing professional development, integrated into day-to-day work, can also be combined with formal programmes. In general, a climate of education reform, a high policy profile, new information technologies, generous donor funding, and international exchange of practice can all support improvements. The challenge in our partner countries is to re-engineer continuing professional development systems, such as the contribution of schools, businesses and local authorities, and to empower the teaching profession in its



own development, while aligning with the changing educational and social environment. It's all very well to say that, but making it happen is a different matter. We believe it is very much in your hands, as the professionals. That's why we have developed this Toolkit with you in mind, and we hope to continue the dialogue with you over the coming months and years, through the digital tools and networks that are linked to the Toolkit, and at the events where we have the privilege of meeting and hearing from as many of you as possible.

# **Part 4.**

## **Where to next?**

**Connecting policy and practice**

**Where to next?**



## Part 4.

# Where to next?

**As we have seen, we are at a crossroads from neatly hierarchically organised education and training systems, to skills eco-systems in which skills needs change constantly and the ways we learn are much more diverse and personalised. From education systems that train young people before they enter the labour market, the focus is shifting toward lifelong learning and human capital development.**

This raises question for learners: How can we navigate these systems? Which skills and qualifications are important for me? What do I want to learn, what do I have to learn, how can I obtain the skills and qualifications that I need to progress? How can I combine learning with work and other commitments?

For teachers and trainers there are questions such as: What is my role apart from knowledge provision and applying more digital learning solutions? How should I facilitate learning and coach individual learners? How can I help individual learners in their learning outside the classroom?

For guidance professionals there are questions that include: How can I support individuals in developing career management skills? How can I use much more diverse information sources and labour market information? How systems that support individuals in managing their own careers be developed?

Policy makers would like to ensure that people have access to quality learning, and understand the changing paradigm shifts and how digital transformation will affect the organisation of education and training systems.

What is clear is that in the skills eco-system the voices of learners, professionals and policy makers must be heard. A key message from our toolkit is that sharing experiences, developing and disseminating practical tools, networking and celebrating success, are as important as clear policies. Rather than system tools, there is a need for tools to support learners, citizens and professionals that work at the grass roots level. The following are the key recommendations that we make from this report.

### Egypt Integrated Urbanism and Sustainable Design Programme

In the Integrated Urbanism and Sustainable Design Programme at Ain Shams University in Egypt, students obtain experience with community services. Students and staff are partners in learning in real world settings through a learning-teaching-research nexus. Students are encouraged to dive into the real world and get actively involved in questioning realities. They develop reflexive and practical skills and learn to find integrated, interdisciplinary solutions for planning, managing and designing landscapes, cities and buildings.



Learning can happen anytime, anywhere, in different forms to meet diverse needs, and professionals in lifelong learning and lifelong guidance are the people who make it happen.

Positive change is happening, and the hundreds of success stories we received for this Toolkit show it.

### **USERS should be at the centre of education and training systems...**

- Always put yourself in the shoes of learners, workers and employers when designing and implementing policies, curricula, activities and tools.
- Celebrate the role of professionals in empowering users to find their way in society and life, career and jobs, through learning and guidance.
- Reach out to users who need extra support – such as adults with low or obsolete skills, migrants and refugees, people with disabilities, and unemployed youth – don't wait to be asked.
- Make career information and guidance accessible and readable for users, backed by real-time labour market information that is communicated effectively.
- Help to meet individuals' needs and aspirations by developing flexible and repackageable qualifications, curricula and learning, rather than a one-size-fits-all approach.

## **...PROFESSIONALS make those systems work...**

- Cooperate with each other and with stakeholders from outside your profession, sector, or institution.
- get involved in shaping change; seek resources and support to make change happen.
- Follow training courses, become as autonomous as possible and gain trust to take initiatives and shape lifelong learning and lifelong guidance.
- Reward innovators and early adopters; encourage systemic change.
- Embrace and make use of digital tools and platforms.

## **...and together all the connected, interdependent elements of skills and qualifications form an ECOSYSTEM**

- Look for the interdependencies among labour market, information and guidance, and learning and teaching.
- Connect policies, institutions, social partners, providers and professionals with positive relationships.
- Break down walls and build bridges; work together to adapt to change.
- Value and disseminate small changes that matter.
- Use feedback, monitor the challenges, measure outcomes and support those who make improvements.

At the ETF, we do not have readily available solutions to propose now, but we would like to work with all of you to shape the future. The ETF's Open Space platform will be central to our efforts to communicate with you. We are also preparing new initiatives that will help us understand better how to make the transition, and we will work on the roles of vocational centres of excellence, on understanding changing demands through skills labs and on creating new learning.

The deliberations at our November 2019 Conference and your feedback will help us to improve this toolkit and we invite you to work together with us on developing or applying tools, sharing experiences, widening our networks and on celebrating our successes.

# ETF OPEN SPACE



**Join us on ETF Open Space: [www.openspace.etf.europa.eu](http://www.openspace.etf.europa.eu) to help us to shape the future of skills and qualifications**

## Where to find out more

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