

skillset AND MATCH

CEDEFOP'S MAGAZINE
PROMOTING
LEARNING FOR WORK

 CEDEFOP

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MAIN STORY:

CEDEFOP 2018 #SKILLSFORECAST:
PRESENT THOUGHTS ON
FUTURE SKILLS

INTERVIEWS:

**MARGARETE SCHRAMBÖCK,
HEINZ FASSMANN, ARJA
KRAUCHENBERG, KEN MAYHEW,
MARCELLO JOSÉ PIO**

MEMBER STATES: DENMARK

**FEATURE: AUSTRIA'S VET SYSTEM:
A WORLD OF OPPORTUNITIES**

**CEDEFOP**

The **European Centre for the Development of Vocational Training** (Cedefop) is the European Union's reference centre for vocational education and training.

We provide information on and analyses of vocational education and training systems, policies, research and practice.

Cedefop was established in 1975 by Council Regulation (EEC) No 337/75.



VET students, vocational school for industry, finance and transport, Vienna

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INTERVIEW	
AUSTRIA PREPARES FOR FUTURE VET CHALLENGES	
Heinz Faßmann , Federal Minister for Education, Science and Research, Austria	
Margarete Schramböck , Federal Minister for Digital and Economic Affairs, Austria	4
FEATURE	
A WORLD OF OPPORTUNITIES	6
ARTICLE	
VET LEARNING OUTCOMES: GLOBAL CHALLENGES	8
INTERVIEW	
ENGAGED PARENTS MAKE A DIFFERENCE TO CAREER CHOICES	
Arja Krauchenberg , President of the European Parents' Association	9
#SKILLSFORECAST	
PRESENT THOUGHTS ON FUTURE SKILLS	10
#SKILLSFORECAST	
CAREER CHOICES AND A POLICY DILEMMA	
Ken Mayhew , Emeritus Professor of Education and Economic Performance, University of Oxford	14
SKILLS PANORAMA	
OCCUPATION IN FOCUS: METAL AND MACHINERY WORKERS	16
ARTICLE	
VET POPULARITY INCREASES AMONG YOUNG PEOPLE IN DENMARK	
by ReferNet Denmark	17
ARTICLE	
EU CIVIL SOCIETY: OFFICIAL VOICE TURNS 60	18
INTERVIEW	
TECHNOLOGY KEY TO ATTRACTING THE YOUNG TO VET	
Marcello José Pio , Expert at Brazil's National Service for Industrial Training (SENAI)	20
ARTICLE	
CEDEFOP WEB PORTAL: FOCUS ON INTERACTIVE CONTENT	21
NEW CEDEFOP PUBLICATIONS	22
COMING UP	23

Redesigning to meet



future needs

MARA BRUGIA

CEDEFOP ACTING DIRECTOR



*If VET is to be
a smart choice for
young people and
adults, it needs to
adapt constantly
and faster than
ever before*



How can we ensure that vocational education and training (VET) is fit for tomorrow? Such reflections characterise the current discourse. A clear message from the Austrian EU Presidency at the VET conference in July, to which Cedefop contributed, was that all parties' voices should be heard in this debate.

The Presidency will not only take the debate forward but also allow us greater insight into Austria's strong VET system. For this purpose, we invited ministers to offer us their own insights into the system and their future plans; we also asked learners and teachers how they perceive VET and its value.

If VET is to be a smart choice for young people and adults, it needs to adapt constantly and faster than ever before. Anticipating what might happen allows us to be proactive rather than fix adverse effects at a later stage, often at high cost.

Cedefop's most recent European skills forecast up to 2030, presented at a high-level event in June, serves this very purpose. Labour market information can also aid individual education choices and encourage further learning.

To support the work of career guidance staff, Cedefop has recently redesigned the Skills Panorama, which, so far, had mainly addressed policy-makers and researchers. Our new toolkits and interactive features on various policy themes are another way in which we fulfil our commitment to support policy learning.

Although each country's VET needs to develop its own responses, all share the same challenges and may learn from each other, tapping into VET's potential to influence the future by empowering people and companies.

A focal point for dialogue to help shape the future, the European Economic and Social Committee (EESC) celebrates its 60th anniversary this year. At Cedefop, we congratulate our founding mothers and fathers on their past achievements and are committed to continued fruitful cooperation. ■

Austria prepares

for future challenges

VET



HEINZ FASSMANN

FEDERAL MINISTER FOR EDUCATION,
SCIENCE AND RESEARCH, AUSTRIA

Austria holds the rotating EU Presidency for the second part of 2018. The country's vocational education and training (VET) system is widely regarded as one of the best, offering learners the chance to combine school-based education with work experience. More than 70% of young people choose this path. *Skillset and match* spoke to the two ministers responsible for VET about the way they work together and the challenges ahead from national and European perspectives.

Minister for Education, Science and Research Heinz Faßmann is a university professor but has also done research on VET. He spoke of his cooperation with the Ministry of Digital and Economic Affairs: 'We have a long tradition in working jointly on VET. The two ministries share responsibility for apprenticeships – we take care of school education, while they are responsible for in-company training. We are also organising events in the course of the Austrian EU Presidency together. The social partners have a crucial role as they take care of the modernisation of apprenticeships, final apprenticeship exams and subsidies. They were also involved in the strategic planning and preparation of the Presidency.'

According to Mr Faßmann, Austria is prepared for the challenges VET faces from digitalisation, artificial intelligence and automation: 'Modern, competence-oriented curricula, up-to-date IT equipment and committed teachers are vitally

important to being prepared for challenges. In VET, many teachers maintain intensive contact with industry, and schools are firmly rooted in the respective economic region. In 2016, a ministerial working group on vocational education 4.0 was founded to support vocational schools. In 2017, teacher training course "Industry 4.0 – Vocational training 4.0" was introduced. Seminars focusing on big data, block chain, cybersecurity, IT and machine learning are being developed. To raise interest in research and innovation, students are introduced to this content by age-appropriate use of (mini) robots and programmes.'

Part of the challenge is integrating migrants into education and the labour market. Mr Faßmann explains what is being done: 'Participation of migrants in VET is of significant importance for their social integration. Practical education in enterprises means they will be taken into full-time employment in many cases. Further initiatives target the validation and recognition of skills and qualifications gained outside Austria. These are just two of a number of measures taken. During the so-called refugee crisis, the Ministry implemented a transitional entrance phase into the school system which supports refugees who are no longer in compulsory school age (aged 16 to 24), to enter vocational education or a dual apprenticeship. The aim is to prepare them for vocational training and to ensure their employability.' ■

“ *In Austria, we have a well-established tertiary system that produces highly competent innovators. However, we are facing an increasing lack of competent and qualified workers who could maximise the potential of these innovations* ”

FEDERAL MINISTER FOR DIGITAL
AND ECONOMIC AFFAIRS, AUSTRIA

MARGARETE **SCHRAMBÖCK**



© BVDW/Lendl

The Federal Ministry of Digital and Economic Affairs, the other significant part in the Austrian government's VET cooperation structure, is headed by Margarete Schramböck, who took up her duties after a successful career in the private sector.

She places cooperation in a broad perspective: 'To run a successful dual system, all bodies representing the education system, at federal, regional and local levels, as well as those from the economy, have to work closely together. The task of my ministry is to modernise occupational profiles so that they best meet the needs of the economy. Our aim is to develop targeted and modern profiles that should be swiftly implemented. That means that all responsible ministries, social partners and companies have to cooperate in a dynamic, yet non-bureaucratic way.'

With her background in industry and the ministry's remit, Ms Schramböck is well-placed to ensure company engagement in apprenticeship. She tells us how it comes together: 'Due to technological and societal developments, and the requirements of the labour market, qualifications and skills are permanently evolving at all levels. In Austria, we have a well-established tertiary system that produces highly competent innovators. However, we are facing an increasing lack of competent and qualified workers who could maximise the potential of these innovations. The dual system is one of the best ways of addressing the challenge: its success is

directly linked to the training companies. Companies – industry and SMEs – are seen as partners in dual VET, involved directly in all developing processes, such as expertise on future skills and developing new professional profiles. This cooperation is necessary to keep the dual system fit for the future.'

Taking an Austrian EU Presidency perspective, Ms Schramböck outlines what Europe needs to be a leader in digital skills: 'VET is a key area in making Europe fit for the digital transformation, and it must work on two levels. First, new occupational profiles must be implemented, incorporating current trends in digitalisation. For example, online retailing is still increasing, so the need for high-qualified e-commerce traders, online marketing experts or app-developers is increasing too. Second, existing occupational profiles have to be modernised and enriched with new technological approaches. It will be our task to combine both strands in a European digital skills programme, which must be reflected at all education levels. The European Commission's *Digital education action plan* is a step in the right direction.' ■

Austrian EU
Presidency website



a world of opportunities

“ *We give our students general education and the vocational skills they need for their future work* ”

Skillset and match travelled to Vienna to find out first-hand how the people driving and benefitting from Austria’s famous vocational education and training system – teachers and learners – feel about their choices and future prospects.

We first went to the higher school of technical education TGM, an impressive building complex in the Brigittenau area of the Austrian capital. TGM dates back to 1879 and now boasts seven colleges and a testing institute with a total of 2 600 students, comprising 14-19-year-olds and employed adults.

Head teacher Karl Reischer refers proudly to the school’s motto: ‘rooted in tradition, committed to the future,’ adding: ‘The education we provide is very good on the technical side. We also give our students general education and the vocational skills they need for their future work. Our graduates achieve level 5 on the national qualifications framework and, after three years of employment and an additional exam, they get to level 6, which makes them fit for the companies. We have good contacts with industry and adapt our curricula regularly to keep up with developments.’

Students seem generally happy with what they are getting, too. Lara Klein, 16, enrolled in an IT course because she worked with computers before and found it interesting: ‘I also think that, as IT is advancing daily, it could give me good job opportunities in the future.’ Eighteen-year-old Agam Cheema had encouragement from his family: ‘My

uncle and my father are programmers and they told me to come here to work on my developer skills.’

Their teacher, Bettina Fischer, worked in the army as a network technician before joining the TGM. She enjoys seeing her students motivated: ‘Some of them chose to come because they thought they’d have a programme of PC games and some because their parents wanted them to. But most of them love to work with PCs and want to do it professionally in the future.’

A student in plastics engineering, 18-year-old Anna Maria Monks, always loved chemistry and had an interest in plastics: ‘This school offered both, and I knew I could use this knowledge in the future as well.’ She wants to go on and study marine biology and work ‘to get rid of the environmental problem of plastics in the ocean.’

Mechanical engineering student Pelle Rittenschober, 17, wants to follow in the footsteps of his father who ‘is also an engineer and someone I look up to.’ His classmate Anja Hofbauer, still only 15, was attracted by the workshops: ‘I was here on the opening day, saw the workshops and thought “I have to do this”!’ When she finishes school she wants to study science.

Ridoy Rahman, 18, says he has been interested in electrical engineering from a young age: ‘I’ve always wanted to know how machines work and what their purpose is.’ He has the support of his parents who think, however, that he should continue to higher education to find the perfect job.



Mechanical engineering students at the TGM, Anja Hofbauer and Pelle Rittenschober

APPRENTICES AT WORK

On the other side of Vienna, we visited the vocational school for industry, finance and transport, which has about 850 students, eight professions and 35 teachers.

We met 19-year-old Petimat Isabajewa at her workplace, a branch of Bank Austria. She works at the branch serving customers four days a week and goes to class every Wednesday. Petimat chose this path because she 'loves to work with people' and it gives her employment options. Her fellow apprentice Marcel Klaric, 18, says he has already secured a job at the bank.

Their supervisor, Dejan Tovilovic, also started as an apprentice. He joined the scheme at 15 and now, at 23, he is the branch's relationship manager: 'The trainee programme is useful for the bank because we give apprentices the necessary information and after three years we get great staff for the company. For them it is also a great opportunity because they have a good job here with us and learn what they need to help progress to a higher position.'

Back at the school, Adrian Kirchner, 21, was having his final exam the day after we visited. He chose to become an industrial clerk because he 'didn't like school too much and wanted to do something practical'. He was also eager to earn his

first money and 'be independent'. His apprenticeship was at a medium-sized company that makes electrical parts. Unlike many of his fellow students, Adrian is not planning to practice his profession: 'I think about becoming an entrepreneur. But a lot of the things I learned here will help me later in life to build my own company, to be successful.'

Margot Dorn has been teaching English and economics at the school for about 10 years. She thinks of herself as 'more of a trainer than a teacher because I try to train my students and not just teach them theory. I want to help them find their way, to manage their personal and work life.'

Helping young people 'get a solid basis for their job' is also the goal of head teacher Barbara Jarka. She believes that the school 'prepares them well for challenges such as digitalisation and for their professional future; and, if they want to, they can do their *matura* for an opportunity to go to university.' ■

Die Schule der
Technik (TGM)



Berufsschule für
Industrie, Finanzen
und Transport



VET

learning
outcomes:

global challenges

Recognising the need for international cooperation, Cedefop – along with UNESCO – organised the third policy learning forum on learning outcomes in vocational education and training (VET) in Thessaloniki. Cedefop's ambition to make its *European handbook on defining, writing and applying learning outcomes* international, led it to invite representatives of 30 countries including some from beyond the European Union.

Malik Althuwaynee, from the National Qualifications Authority of the United Arab Emirates, told *Skillset and match* of his positive reactions: 'This is a great event because it has gathered together experiences and ideas from an international perspective. It goes beyond the border of Europe.' He noted that 'participants from

different organisations clarified the challenges and opportunities that we have now or are looking at in the future.'

According to South Africa Qualification Authority's Faith Nyaka, 'the documents that Cedefop has produced will help us to design some guidelines and our stakeholders to develop their own documents.' Mrs Nyaka commented on the outcomes of working group sessions on the handbook material: 'I got answers on how to deal with vocational qualifications and how (other countries) deal with credit values.'

The enthusiasm was shared by Pauline Whiteman, Acting Chief Executive Officer of Trinidad and Tobago's National Training Agency. 'This forum is a platform for looking at the challenges and

trying to come up with solutions; I believe we can achieve this together and share what we learn around the world. The outcomes of this forum will go a long way towards assisting all countries looking at developing and implementing qualification frameworks,' said Mrs Whiteman.

Mere Vadei, of the Education Quality and Assessment Programme in Fiji, thought it 'reassuring that the issues we've been thinking about and trying to solve are not unknown to the rest of the countries here.' She added: 'It was encouraging and an eye-opener just to know that these kinds of steps are being taken across the world.'

Panya Chanthavong, representative of the Asian Qualification Reference Framework Committee, from Laos, also shared this feeling: 'We have the spirit of learning by doing. We have to use this experience to design our system.' He stressed the importance of cooperation, saying that 'Europe can share experience. Asia can take from Europe but also Europe can benefit from us and from what we are doing.' ■



European handbook on
defining, writing and applying
learning outcomes



Cedefop's learning
outcomes project



Engaged parents

make a difference to career choices



ARJA KRAUCHENBERG

PRESIDENT OF THE EUROPEAN PARENTS' ASSOCIATION

“ *Nothing schools do can counteract what parents are doing at home – their influence is much bigger* ”

Parents are one of the most important influences, some say the most important, in shaping young people's lives, education and careers. Representing more than 150 million of them is the European Parents' Association (EPA). EPA's President Arja Krauchenberg, from Austria and a tourist guide by profession, was a speaker at Cedefop's policy learning forum on learning outcomes.

She told Skillset and match how EPA works with and for parents to promote the right kind of education for their children.

We have been working for a long time on raising the prestige of vocational education and training amongst our members and in their respective countries. Our motto is that parents are the primary educators of their kids. And that has a great impact when it comes to choosing a career pathway, ideally with their children, but very often for their

children. It still isn't always a participatory process. But we are working on that as well.

Policy-makers in Europe are concerned about not engaging parents enough. Have you been working with them?

We are members of working groups within the European Commission; we participate in projects and we are trying to raise the voice of parents wherever we can. One of the things I notice is that teachers are resistant to working with parents because they are not trained for it, they are not used to it. When young colleagues come through university and would be prepared to do so, they are told by the older colleagues in school to 'beware of the parents'. It's sort of a vicious circle that we have to break. I am not saying that all parents are wonderful. Some are difficult to get to and some come to the school thinking it is only for their children.

So, parents need to be educated as well.

It goes both ways. There has to be training for teachers, for head teachers, but also for parents. In some countries, that works really well; generally these are countries where parent representation is well-financed by the State. Ireland is a great example, other countries less so but we are trying to foster that wherever we go. We want to engage with other stakeholders and to encourage them to involve parents. Nothing schools do can counteract what parents are doing at home – their influence is much bigger. If we can make them understand that learning outcomes will put the learner at the centre, that it's a holistic approach, and that all children will ultimately benefit, they will accept that because they want the best for their children. ■

European Parents' Association



Present thoughts on future skills

“ *Ageing of the population will lead to less consumer expenditure on goods and more on health-related services; government expenditure is expected to increase accordingly* ”

Many people appear to have expertise in hindsight, always able to detail exactly what should have been done long after a decision was needed on action to be taken. There are few with similar expertise in foresight, able to explain what needs to be done to ensure that the future evolves as desired or to prevent negative scenarios arising. And yet, when it comes to the skills that Europe needs to match a thriving economy with capable and contented workers, detailed forecasts are essential.

This is where Cedefop's skills forecasts come into play, as was seen in the launch of the 2018 edition at a high-level event in Brussels in June. The skills forecast is a unique data set, providing estimations of skills demand and supply by sector, occupation, and qualification level. The 2018 edition has projections for each EU Member State, plus a few more countries, for the period up to 2030. It highlights challenges in several areas which need to be considered both in their own right and also in relation to each other to ensure policy is appropriate to EU goals.

ECONOMICS MEETS DEMOGRAPHICS

Over the forecast period, the EU is expected to show relatively low growth rates, recovering from the legacy of the crisis but supported by global growth, particularly in China. Over the medium term, GDP will stabilise at lower levels mainly because of demographic trends but growth will be translated into sectoral employment under two main driving forces.

First, ageing of the population will lead to less consumer expenditure on goods and more on health-related services; government expenditure is expected to increase accordingly. Second, increasing automation will lead to fewer jobs being created in manufacturing but there will be new jobs in supporting sectors, with the assumption that workers will keep their jobs when robots are brought in. These factors will lead to changing GDP composition, which will impact employment patterns.

Demographics will also affect the dynamics of workforce replacement. This will mostly be caused by retirement, possibly also by career change, with nine out of 10 job openings created by replacements. The need will be highest for older workers, such as in agriculture and those with low-level qualifications and occupations. Even though there is likely to be a decline in overall employment for some occupations, the need to replace existing workers will create numerous job openings.

Some of the same factors are also asking questions of policy-makers on the supply side. The skills forecast indicates that overall participation rates will fall for most countries in the period up to 2030; this is mainly the outcome of a workforce that is ageing, as the older workers' group is increasing and that of prime-aged workers decreasing. This tendency is not expected to cause a decline in the overall workforce over the period, as growing populations will compensate, but it may be a matter for the future of Europe's labour force.

CEDEFOP SKILLS FORECAST 2018

Key facts: EU-28

243 232 000 Employment in 2030

6%

Increase from 2016

0.4%

Growth per year

Fastest growing sectors

Growth per year 2016-30

Business & other services

1%



Distribution & transport

0.6%



Highest demand occupations

Total job openings 2016-30

11 984 600

Business and administration
associate professionals

9 276 600

Sales workers

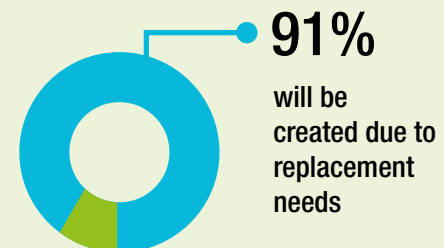
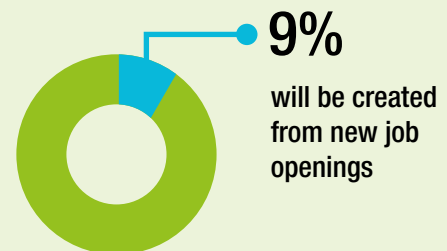
8 710 160

Cleaners and helpers



151 337 000

Total job openings 2016-30

About 4 in 5 new job
openingswill relate to high-skilled
occupations

This asks some interesting questions. Are measures such as the extension of working life, flexible forms of work, and support to female participation, which focus on specific groups of workers, enough to deal with the issues arising? Will this developing situation allow Europe to support high-value-added, knowledge-intensive growth? Will its workforce be adaptable to the changing world of work? And will adult learning policies be sufficient to sustain upskilling and reskilling of the labour force in an age of accelerated technological change?

SERVICE SECTOR A WINNER

The skills forecast suggests that increased orientation of employment towards the service sector will continue. Hotels and catering, health and social

work are among the sectors where most employment growth is expected, while manufacturing, public administration and agriculture are expected to decline. However, even though basic manufacturing employment may be lower, in some high-value-added sectors, such as optical and electronic equipment and motor vehicles, it will grow.

The question in this context is what it will take for the EU to be ready to sustain the shift towards high-value-added sectors. Will employers manage to fill these vacancies? Evidence from Cedefop's European skills and jobs (ESJ) survey suggests that four out of 10 employers are already having problems filling their vacancies and this could intensify in high-value-added sectors.

It is often asked whether automation will offset job growth but this seems not such a pressing issue.

Sectors expected to grow are typically those where technology has relatively limited penetration: legal and accounting services, research and development, advertising and market research, administrative and support service activities. The more appropriate question is how employment and education policies will respond and safeguard employment in sectors where technology has the highest penetration.

The interrelationship of sectoral and demographic challenges may need to be assessed from the perspective of opportunities, asking whether workers can be directed towards new service sectors and their increasing employment potential. However, in some sectors non-standard forms of employment are dominant and these are also most likely where platform work occurs. The focus for policy-makers here may not be so much the number of jobs as ensuring decent work for everyone.

HIGH SKILLS IN DEMAND

Job polarisation is expected to increase, with more jobs in the higher and lower skills spectrum and fewer mid-level jobs. Overall, four of five new jobs will be in high-skilled occupations, driven mostly by sectoral changes (growth in service workers) but also technological change that makes some occupations more necessary than others. Many administrative posts, such as general and keyboard clerks or numerical and material recording clerks, will lose a significant share of employment as they become less needed. In contrast, demand for difficult-to-automate occupations, such as legal, social and cultural roles, will be strengthened. Job polarisation is not a new phenomenon but technological advances currently seem to have most effect on routinised occupations. Questions arising are whether we are heading towards a fully polarised labour market and what the implications of this may be.

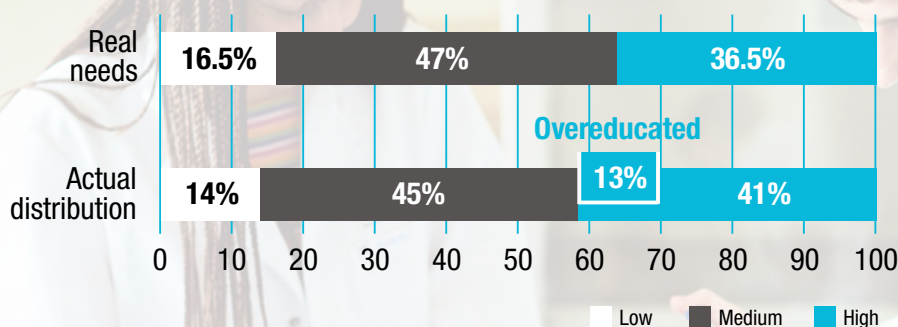
Job polarisation is expected to increase, with more jobs in the higher and lower skills spectrum and fewer mid-level jobs

The skills forecast considers such labour market imbalances, estimating that, by 2030, the need for a highly qualified workforce will account for about 36.5% of total employment. However, supply of a highly qualified workforce is outpacing the demand, so it is more likely that the share of total employment with high level of qualifications will be 41%. From this it can be inferred that a non-trivial share of highly qualified employees will end up in jobs that do not match their level of education.

The forecast suggests evolution towards having a highly skilled workforce, where many individuals may not have the opportunity to use the skills they have accumulated. Yet evidence from Cedefop's ESJ survey suggests that a significant part of the European workforce found their skills at the time of hiring inferior to those required to perform the job sufficiently.

Policies are needed to address these observations, apparently contradictory but part of the same issue of delivering the appropriate level of skills to support the economy while providing quality employment for individuals. Alongside this is the issue of helping the low-skilled escape the vicious circle of low productivity and low wages. Cedefop's skills forecast helps identify the challenges on all fronts that policy-makers need to address. ■

Labour market imbalances: employment by qualification, 2030



Cedefop's 2018 skills forecast



Cedefop's European skills and jobs survey



Cedefop briefing note:
Less brawn, more brain for tomorrow's workers





VIEWS ON SKILLS FORECASTING EXPRESSED AT THE CEDEFOP 2018 SKILLS FORECAST LAUNCH IN BRUSSELS

The goal of forecasting is not to predict the future but to help us to make informed choices to avoid deciding on education and training investments in the dark. Acting proactively is more effective, and often cheaper, than fixing adverse effects at a later stage.

Mara Brugia, Cedefop Acting Director

The most critical challenge we will have to address in the decade to come is job polarisation, which reduces the amount of good and well-paid jobs. Polarisation means widening inequalities between those who have access to good-quality and skills-intensive work and those who end up being low-paid employees in inferior jobs.

Tatjana Babrauskiene, Chair of Cedefop's Governing Board

This is another concrete example of exploiting two of the agencies' most prominent tools, the Cedefop skills forecast and the European jobs monitor, to get even more added value.

Juan Menéndez-Valdés, Eurofound Director, commenting on Cedefop collaboration with Eurofound to predict future skills needed in different types of jobs, using the European jobs monitor framework

Cedefop's skills forecast is an important EU-level data source. It is essential for the work we do in Brussels in the context of the European Semester and to shape the skills for the future labour markets.

Joost Korte, Director-General, DG Employment, Social Affairs and Inclusion

Career choices

and a policy dilemma



KEN MAYHEW

“ *If people going to university think they are going to be rewarded with the great glittering prizes of the labour market, they are wrong* ”

EMERITUS PROFESSOR OF EDUCATION AND ECONOMIC PERFORMANCE, UNIVERSITY OF OXFORD

One of the invited speakers at the launch of Cedefop’s 2018 skills forecast in Brussels was Oxford University Professor Ken Mayhew, who specialises in education and economic performance.

Professor Mayhew spoke to Skillset and match about the dynamics of the forecast and the challenges of future employment.

The forecasts are incredibly important. But we need to think much more carefully than is often the case about their policy implications. And, as the Cedefop people would be the first to say, these are not conventional forecasts, they are projections. So, we have to think about why the projections themselves might turn out to not be true in a few years’ time. In my own country, if you went back 20 years, probably

only about a quarter of people in management occupations had a master degree. Now we are saying they are essential.

You said that governments may need to rethink how they spend their money and perhaps spend less on the degrees that give people the skills but not the jobs.

It would be nice if every single sector or education and training system had more money. But it seems to me that people today are going to university to acquire jobs of, as far as one can tell, the exact same content as 10 or 15 years ago, and they need to get degrees to do this. In Britain, this is costly to the individuals. In other countries it is costly to the state, but somebody is paying. In one sense you don’t want to deprive anyone of a university

education. But if people going to university think they are going to be rewarded with the great glittering prizes of the labour market, they are wrong. It may be better to be realistic about that and to say: Why not do an apprenticeship with day release in a technical college? Why not go to a vocational college? Having said that, Britain’s apprenticeship system largely fell apart for a variety of reasons. Successive governments have attempted to resurrect it but with only partial success. The Germanic countries, Switzerland, Austria, Germany, and perhaps I can include the Netherlands in that, kept an alternative sector although the higher education sectors expanded. They are in a much easier position to fine-tune relative spending than a country like Britain.



With the challenges it faces, could vocational education and training (VET) be a solution to problems such as over-qualification or polarisation?

I don't think we can stop polarisation as such. Inevitably any bout of technical change, as we've seen through history, changes the structure of jobs; so, I don't see the sorts of patterns that were being described at the launch changing quickly. But there could be change: just because by occupation we see the hollowing out of the middle, that doesn't have to happen in terms of pay. A lot of the top jobs in terms of title will actually not be top jobs in terms of pay. And, similarly, at least in some countries, there is scope for increasing the relative pay of people in relatively humble or ordinary jobs. That's not the job

of VET; it's the job of civil society, it's the job of trade unions, the job of the social partners, to think about what jobs are really worth. In part that's the laws of supply and demand but it's more than that. In an old persons' care home, certainly in Britain, staff are paid relatively little more than the minimum wage. I really couldn't do that job. It's humbling to see the people who do it. And there must be scope for thinking about relative pay in that way.

If what you said happened then it might make VET more attractive, because that's one of the problems it is facing.

You are distinguishing between VET on the one hand and universities on the other. I'm thinking them as part of a continuum. Because the more you expand higher education, the

more higher education is doing the jobs that once were done in vocational training colleges. Today in Britain nurses go to university to train as nurses. Most police forces now require people to do a degree to become a police officer, so universities are now part of the VET system. There is a distinction between the academic and the vocational. In the end, yes, we need to make vocational more attractive to more people rather than forcing them to do one of two things, to do an academic course which they may not enjoy because their skills, their talents and their interests are elsewhere. It will encourage them to think more sensibly about that. At the same time, if we think carefully of a VET system, we can balance where the resource goes better. But, as I say, it is easier in some countries and much harder in others. ■

OCCUPATION IN FOCUS:

Metal and machinery workers

Skills Panorama continues its series of sharing trends and challenges for selected occupations in the European labour market.

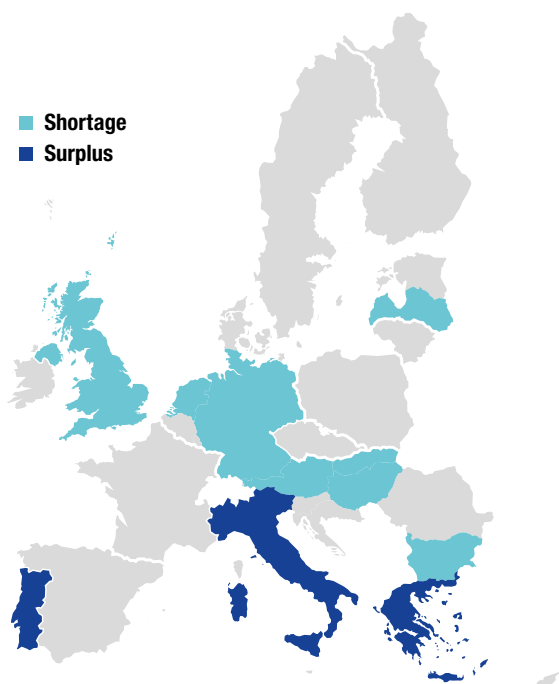
Metal and machinery work – such as steel workers, welders, blacksmiths, toolmakers and machinery mechanics – is a skilled occupation employing more than 8 million people in the European Union (EU), mostly in manufacturing and wholesale/retail trade sectors.

They are in short supply in nine EU countries, especially in those with a strong industrial base such as Germany and Slovakia.

However, Cedefop’s skills forecast predicts that fewer metal and machinery workers will be employed in the future as new technologies will allow for further automation of their tasks, especially those of structural iron or steel workers.

At the same time, deployment of a new generation of machines and robots will keep demand for mechanics and maintenance fitters high; it will

WHERE IN THE EU ARE METAL AND MACHINERY WORKERS IN SHORTAGE?



NB: Countries in grey did not report any shortages or surpluses

METAL AND MACHINERY WORKERS



- More than **8 million** jobs in the EU (2016)
- Key employment sectors: **manufacturing and wholesale/retail trade**
- **Shortage occupation** in nine EU countries
- **Employment decline to 2030** due to further automation of worker tasks
- **Skills shortages** still expected: more than half of current workers will leave their jobs, mainly because of retirement.

DEMAND FOR METAL AND MACHINERY WORKERS IN THE EU TO 2030

- New/lost jobs **-1 077 632**
- Replacements **4 260 186**

also contribute to rising skill needs related to monitoring, diagnosing and repairing.

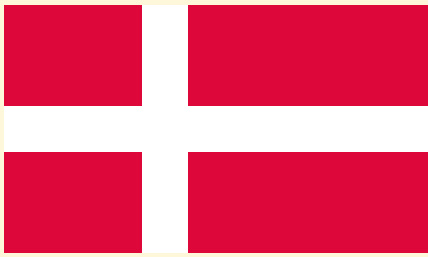
The ageing of these workers is expected to significantly shape future employment trends: over 4.2 million jobs, more than half of the occupation’s current workforce, will be vacated by 2030 as workers retire or leave for other reasons. Coupled with the declining number of graduates from relevant vocational education and training fields, employers are expected to face difficulties in finding such qualified workers. ■

Learn more about metal and machinery workers



More on Cedefop’s skills forecast





VET
popularity
increases
among
young
people in

The education figures for 2018 show an increase in Danish students choosing vocational education and training (VET) career paths, highlighting the growing popularity of VET studies.

Making VET an attractive study option for the younger generation has been a continuing challenge for Denmark, since young learners seem to prefer general upper secondary education to vocational. Foreseeing a lack of skilled workers coming into industry, the authorities became concerned about the capacity of those joining the workforce to provide a match for the skills the labour market demands.



The first objective of the 2015 VET reform in the Scandinavian country identifies the need for more students to choose to start a vocational programme immediately after they finish level 9 or 10. By 2025, the Ministry of Education aims to achieve a share of at least 30% of level 9 or 10 students deciding to follow VET.

The 2018 figures show promising results, including improved student guidance and an increase in VET validity, owing to the establishment of admission requirements. In 2018, 19.4% of level 9 or 10 students applied for vocational education and training programmes, up from 18.5% in the previous year.

And that's not the only good news! Introduced in 2012, the EUX programme, which aims to bridge the gap between general and vocational upper secondary education and training, is also becoming more popular.

The programme offers academically strong students the opportunity to gain both vocational qualifications and access to the labour market, and general qualifications, with an opportunity to continue to higher education. In 2018, 32% of VET programme applicants opted for EUX, a 2% increase on 2017. ■



by REFERNET DENMARK

EU civil society:

official voice turns 60

“ *The European Economic and Social Committee helps shape EU legislation and policies* ”

A frequently-heard criticism of the European Union (EU) is that it is disconnected from its citizens but a reality check paints a different picture. As early as May 1958, a bridge between the then European Economic Community and civil society in the Member States was established, as the Economic and Social Committee (then ESC, today EESC) convened its first plenary session.

Despite some opposition, this body, representing the working world and the general public, had been provided for in the 1957 Rome Treaties to assist and advise the institutions. This was at a time when citizens had no say in the composition of the European Parliament. And, had the EESC not been founded, who knows if Cedefop would have been created.

STIMULUS FOR CEDEFOP

From the outset, community policy had included a social policy dimension with vocational training as a significant element. However, with most Member States considering social issues their responsibility and the economy picking up, acting at community level did not have high priority. Nonetheless, the (E)ESC saw a need to link education and work more effectively and supported the European Commission's aims to coordinate vocational training policies at community level.

The 1968 student movements, which highlighted the need for reforming education, and the 1970s economic crisis triggered more dynamic developments. Vocational education and training (VET) was considered key to helping reduce unemployment, adapt to new technologies and modernise the

economic system. Harmonising VET would aid worker mobility. But this would require better knowledge of VET, German trade unionist Maria Weber argued, leading to the suggestion to establish a European centre for the study of vocational training, inspired by Germany's VET research centre (today's BIBB) that had just been created.

HOW IS CIVIL SOCIETY'S VOICE HEARD?

The EESC helps shape EU legislation and policies. The European Council, the European Commission and the European Parliament have to consult the EESC on their legislative proposals. They may also seek its view in other cases.

WHO IS IN THE EESC?

350 members representing the so-called 'organised civil society' composed equally of:

- employers from industry, commerce, services and agriculture and their associations;
- trade unionists from national unions, confederations and sectoral federations;
- civil society, particularly in the economic, civic, professional and cultural field.

Nominated by their national governments, members are appointed by the Council for a 5-year period. They work independently, are not politicians and are not paid.



The February 2018 policy learning forum on upskilling pathways was one of the EESC-Cedefop recent joint ventures

EESC's activities have evolved over time and currently comprise six sections and three observatories for different policy domains and a consultative commission on industrial change.

Proposals are discussed in the respective section with the aim of drawing up an opinion. Starting from often quite contradictory views, this requires dialogue to identify common interests and possible compromises.

External experts may be consulted. Cedefop has been invited to share its expertise on various issues and EESC opinions have reflected our work. Following consensus in the section, the draft opinion is discussed and voted on in the plenary. Once adopted, opinions are sent to the EU institutions and made public. The EESC can also initiate its own opinions.

VET is discussed in its Employment, Social Affairs and Citizenship section and the Labour Market Observatory. From Cedefop's perspective, probably the most important opinion was that expressed in 1974 on the Commission's proposal to establish a European vocational training centre. The EESC has also expressed a view on the currently planned revision of Cedefop's founding regulation.

Recently, the EESC also moved into policy evaluation, strengthened its cooperation with the European Parliament and created a sounding board for reflections on the future of Europe. Giving a voice to Europe's young people and involving them in education reforms features prominently among the priorities of EESC's current President Luca Jahier.

EESC-CEDEFOP JOINT VENTURES: RECENT HIGHLIGHTS

- **2013:** Labour Market Observatory conference on skills and mobility for competitiveness hosted by Cedefop.
- **2015:** Cedefop-Eurofound 40-year anniversary event on work organisation and workplace learning hosted by the EESC.
- **2018:** Policy learning forum on upskilling pathways: a vision for the future together with the Section for Employment, Social Affairs and Citizenship held at the EESC.
- **2018:** Labour Market Observatory education and training-employment encounters in Lisbon to encourage dialogue between national stakeholders and reinforce the links between EU-level and national policy-makers.

CLOSE TIES WITH CEDEFOP

In recent years, Cedefop and the EESC have reinforced their collaboration through contributions to opinions and meetings, joint events and exchange of information on priorities. Ties have always been close with our founding fathers and mothers, not least through former and current Cedefop Governing Board members, including EESC's previous President Georges Dassis (2015-18), and the current Cedefop Governing Board Chair Tatjana Babrauskienė. ■

Find out more about the European Economic and Social Committee



Technology key to attracting the young to VET



MARCELLO JOSÉ PIO

EXPERT AT BRAZIL'S NATIONAL SERVICE
FOR INDUSTRIAL TRAINING (SENAI)

“ *If a sector still uses manual technologies, Generation Z, who were born to cellphones, tablets and computers, will not see it as attractive*

In Brazil, as in many European countries, parents want their children to go to university instead of following a vocational education and training (VET) path. And VET is not a priority for the government, either, according to Marcello José Pio of the country's National Service for Industrial Training (SENAI).

Mr Pio was a guest speaker at Cedefop's policy learning forum on skills anticipation, where he presented SENAI's skills foresight model, considered one of the best in the world. He told *Skillset and match* that the largest South American country, with a population of over 200 million, has many issues to deal with when it comes to VET, skills and technology.

'Brazil is a diverse country and is technologically and organisationally heterogeneous,' says Mr Pio, adding that, for SENAI's model, 'we do small sectoral studies and try to apply many characteristics of each sector at national level. For example, technology evolution in the textile sector in Sao

Paulo, a big and rich state, will be different from that of Bahia, a poor state. When we study with the experts, they need to take into account all these differences.'

The European Union is also large and diverse and the Brazilian expert believes that some of its Member States can benefit from this type of foresight model: 'It is not possible to apply the model across the EU, because the information will be uncertain. In our case, the variations between states are not that big. But it is possible to apply it in countries which are in development, economically, technologically and organisationally. It's the sectoral approach that makes the difference. For example, skill mismatch is a big problem in Brazil. I think this model is good for countries with similar problems.'

To attract more students of Generation Z – or post-millennials – to VET in developed countries, Mr Pio argues that 'we need to use not only money but technology. If the students know that they will use digital technologies in

a sector, they will be positive. But if a sector still uses manual technologies, Generation Z, who were born to cellphones, tablets and computers, will not see it as attractive.'

According to SENAI's foresights, 'all sectors in Brazil have the potential to change technologically but only sectors like chemistry, automotive or aerospace have the opportunity or the reasons to buy new technologies and demand new profiles. Human-intensive sectors could also automate, but it's cheaper to hire a person than change the technology. In Brazil, salaries are low: there are no economic reasons to change a manual process, where they use 10 persons, for an automated one where they use four. It's not viable economically.' ■



Find out more about SENAI

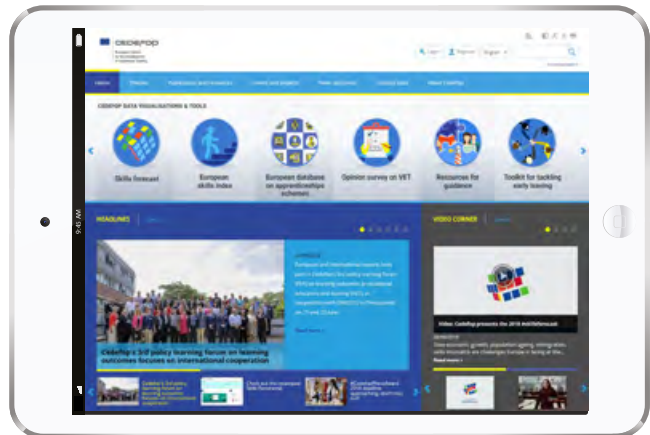


Cedefop's policy learning forum
on skills anticipation methods
and practices

Cedefop web portal:

focus on **interactive** content

“ *The website provides many new data visualisations and tools worth exploring* ”



Cedefop's web portal has undergone a facelift to showcase better its interactive content. Over the years, the web portal has become a large resource of interlinked web pages and applications, bringing to life the wealth of content that Cedefop generates.

It provides a range of working tools that offers policy-makers, social partners, researchers, practitioners and interested citizens the ability to reach the content they seek quickly through enriched features such as access to relevant resources and data sets, powerful search filters and enriched country-specific results.

Cedefop's interactive content is now just one-click away from the homepage, with many new data visualisations and tools worth exploring:

- the 2018 edition of the skills forecast is enriched with new dashboards for viewing future trends by labour force, employment and job openings or focusing on country, occupation and sector;
- the European skills index combines a large number of indicators into a single measurement of a country's skills system.
- Cedefop's first European opinion survey on vocational education and training (VET) is a series of interactive visualisations that offer access to EU citizens' opinions on awareness, attractiveness, experience and effectiveness of VET;
- Cedefop's European database on apprenticeship schemes includes data on schemes over several

other indicators across the 28 EU Member States, Iceland and Norway allowing for cross-country or cross-scheme comparison;

- resources for guidance is a web-based set of tools that showcase effective use of labour market information and information technologies in career development services across Europe;
- a toolkit for early leaving is a Europe-wide set of resources inspired by successful VET practices in helping young people to attain at least an upper secondary qualification;
- the mobility scoreboard is assisting policy-making and monitoring developments in mobility policies in Europe. It provides analysis on weaknesses and shortcomings; identifies good practices and suggests reforms.

The ambition is to enable online users to see connections more effectively as they are occurring between different project findings. In today's highly competitive landscape, finding these correlations among the data has never been more important.

Stay tuned – there is more interactive content to come! ■

Check out the Cedefop web portal



new

CEDEFOP PUBLICATIONS

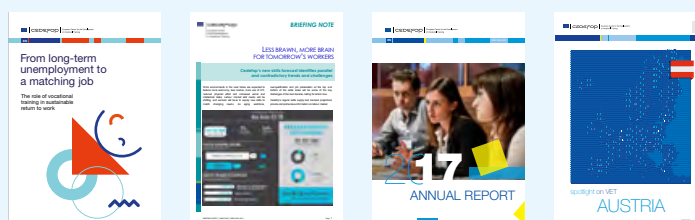


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IN FOCUS

ANALYSIS AND OVERVIEW OF NQF LEVEL DESCRIPTORS IN EUROPEAN COUNTRIES

This Cedefop publication shows that all 39 countries taking part in the implementation of the European qualifications framework have now defined – and for a large part adopted – their learning outcomes levels. Level descriptors are essential elements of national qualifications frameworks (NQFs) established and implemented across Europe. They define what is meant by learning outcomes, describing what an individual is expected to know, be able to do and understand, having acquired a qualification at a particular level.



Download the publication you wish
by clicking on the cover or title

OTHER PUBLICATIONS:

- From long-term unemployment to a matching job
- Briefing note – Less brawn, more brain for tomorrow's workers
- Spotlight on VET Austria
- Spotlight on VET Hungary
- Spotlight on VET Greece
- Spotlight on VET Slovenia
- Spotlight on VET Lithuania
- Spotlight on VET Poland
- Spotlight on VET Italy
- Annual Report 2017

coming up



For more information on what's coming up go to the events page on the Cedefop website: www.cedefop.europa.eu/events or scan this QR code

IN FOCUS

VET IN EUROPE: TAKING STOCK AND LOOKING AHEAD

7-8 NOVEMBER

VIENNA, AUSTRIA



The 3rd European vocational skills week, organised by the European Commission, aims to improve the attractiveness and image of vocational education and training (VET). The initiative aspires to showcase excellence and quality, and to raise awareness of the wide range of opportunities in VET. A Cedefop conference on VET in Europe: taking stock and looking ahead will take place on 7 and 8 November as part of the main celebrations in Vienna. Two #CedefopPhotoAward 2018 winning teams will take part in an award gala on 8 November and the closing event on 9 November.

OTHER EVENTS			
SEPTEMBER	27	BRUSSELS, BELGIUM	Cedefop introduces the European skills index, which combines a large number of indicators into a single measurement of a country's skills system
OCTOBER	18-19	THESSALONIKI, GREECE	Second Cedefop policy learning forum on apprenticeships
NOVEMBER	21-23	THESSALONIKI, GREECE	ReferNet, Cedefop's European network of expertise on VET, annual meeting
DECEMBER	13	BRUSSELS, BELGIUM	Cedefop seminar on the future of vocational education and training in cooperation with the Austrian EU Presidency



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