



# skillset AND MATCH

CEDEFOP'S MAGAZINE  
PROMOTING  
LEARNING FOR WORK



 CEDEFOP

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**MAIN STORY:**

NEXT GENERATION  
SKILLS INTELLIGENCE

**INTERVIEWS:**

CHRISTA SCHWENG  
WAYNE HOLMES  
LOUKAS ZAHILAS  
ANASTASIA POULIOU  
VLADIMIR KVETAN

**ARTICLE:**

ADULT LEARNING: IT'S  
BETTER THAN YOU THINK

**MEMBER STATE:**

GREECE

**CEDEFOP**

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

We provide information, research, analyses and evidence on vocational education and training, skills and qualifications for policy-making in the EU Member States.



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# Are we

# skills-intelligent

# enough?

**JÜRGEN SIEBEL**

CEDEFOP EXECUTIVE DIRECTOR



*Cedefop prides itself in having invented skills intelligence. Now, it must become smarter and more people-centred*



More than one year into the pandemic, we are still learning and adjusting. This is true for all individuals, businesses, providers of vocational education and training (VET), policy-makers. Now add in the digital and green transformations, for which Covid-19 has been a catalyst, and the challenges could not be more apparent. Less visible but still around are the opportunities. Where do we stand? Where do we need to go from here? Do we need a compass?

Cedefop prides itself in having invented skills intelligence, an expert-driven process of collecting, selecting, combining and presenting evidence to anticipate labour market and skills trends. Skills intelligence, a compass made by Cedefop, informs VET policy and provision. Read about our high-level conference, held on 13 April, in the pursuit of making skills intelligence more contextualised, timelier and more relevant to people and businesses, supporting decisions on education and training, up- and reskilling, and career and workforce development. If you want to dig a little deeper, read the interview on how skills are being extracted from online job ads, using big data and artificial intelligence methods, providing skills and labour market trends literally in real time.

Speaking of artificial intelligence, we hear from leading researcher Wayne Holmes about its impact on the world of work, education, skills and qualifications. And there are two more fascinating interviews in this edition. Read what Cedefop's Anastasia Poulidou and Loukas Zahilas think about microcredentials disrupting qualifications frameworks. And Christa Schweng, President of the European Economic and Social Committee, shares her views on VET making the digital and green transitions fair and inclusive.

While interviews allow us to study individual points of view, surveys aggregate them. In this issue, we cover one very broad survey, the second opinion survey on VET, and a more tailored one, surveying VET teachers and trainers, school principals and their customers, the VET learners.

Are you curious which Member State we feature this time? Here is my hint: it's Cedefop's host country. Enjoy! ■

# Every crisis brings opportunity



CHRISTA SCHWENG

“ We should take this current opportunity to move to a sustainable, greener and more digital economy, in which new jobs are created and social recovery is ensured

EUROPEAN ECONOMIC AND SOCIAL COMMITTEE PRESIDENT

Christa Schweng has been an advocate for social issues all her professional life. She has been a member of the European Economic and Social Committee (EESC), the voice of organised civil society in Europe, since 1998 and its President since October 2020. A lawyer by trade, she works for the Austrian Federal Economic Chamber (WKÖ). Speaking to *Skillset and match*, Ms Schweng commented on Europe's plan for recovery from the coronavirus crisis, the EESC's contribution, the role of vocational education and training (VET) and cooperation with Cedefop.

**What are, in your opinion, the most important contributions**

**to European civil society dialogue and policy-making that the EESC has achieved?**

Since its creation, the Committee has been promoting the EU's economic and social progress, defending its fundamental values. It is an important source of grassroots expertise for the EU institutions, given that the EESC is composed of members from all Member States, coming from employers' organisations, trade unions and civil society organisations (CSOs). Within the Committee, members work together for the common good of the EU and its citizens. They look for consensus-based solutions to offer policy-makers, reconciling the interests of business, workers and other CSOs. This is the EESC's particular strength. Recent examples of the Committee's work include our quick reaction

to the Covid-19 crisis; as early as March 2020 we called for joint action at EU level, and in June we adopted a resolution with proposals for recovery. Following this, in February 2021, our civil solidarity prize rewarded 23 not-for-profit initiatives to tackle the impact of the pandemic. We were also pleased to see that our considerations have been integrated in the next multiannual financial framework, especially that the rule of law was upheld.

**VET's development has been part of the EESC's work over the years. The Committee is now exploring the effectiveness of VET systems in anticipating and matching skills and labour market needs. How important is the role of social partners in that respect?**

Technological progress, digitalisation and the green



© EU, 2019/EESC

transition are revolutionising life and work. This offers great opportunities for innovation, growth and jobs, but it also requires skilled people to make the best of these transformations. Anticipating skills needs and tackling skills mismatch needs to be everybody's concern, especially as they affect both individuals and companies. The EESC has called on governments, social partners and civil society to work together on skills and lifelong learning. We particularly support initial and continuous VET, dual learning and apprenticeships, as means to acquire relevant skills and avoid skills obsolescence in a rapidly changing world of work. Social partners have a major role to play in diagnosing labour shortages, developing qualifications and providing career guidance. Involving them from the outset is essential to ensure that VET responds to the real needs of employers and workers. Employers particularly need to be involved when updating curricula and qualifications to make sure that learning is geared towards practice.

**Cedefop has been working closely with the EESC in several fields, including upskilling**

**pathways for adults. Our Executive Director presents the Agency's work to the Committee each year. How do you see this relationship with Cedefop?**

We very much appreciate the cooperation with Cedefop and the excellent contribution that the Agency's experts provide to our work. We are also happy to disseminate Cedefop's publications and to take part in events organised by the Agency. I still remember the first meeting that I organised as President of the EESC's Labour Market Observatory, eight years ago at Cedefop's headquarters. Since then, we have continuously deepened our cooperation and the policy learning forums on upskilling adults are just one example. I would very much welcome expanding the themes of our cooperation.

**The coronavirus crisis has set Europe back in many areas. What kind of recovery plan do you believe will help the EU achieve the ambitious goals of the digital and green transitions without compromising citizens' rights and prospects?**

Indeed, the next generation EU needs first to support the recovery and tackle the economic

and social hardship caused by Covid-19. We must also ensure that the funds quickly reach those in need – be it the unemployed or businesses, and especially SMEs which make up most of Europe's employers. But, in the words of Winston Churchill, never waste a good crisis! We should take this current opportunity to move to a sustainable, greener and more digital economy, in which new jobs are created and social recovery is ensured. Skills and VET have a big role to play in this context. The national recovery and resilience plans should consider investments in people's skills, particularly digital and STEM-related skills, as a priority. In a resolution adopted in February 2021, the EESC regretted that social partners and civil society organisations were not involved enough in the drafting of the plans and asked for this to be rectified, especially in the monitoring and implementation phase. The EESC looks forward to cooperating further with Cedefop, both in the context of the recovery from the pandemic and beyond. ■

Learn more about  
the European Economic  
and Social Committee

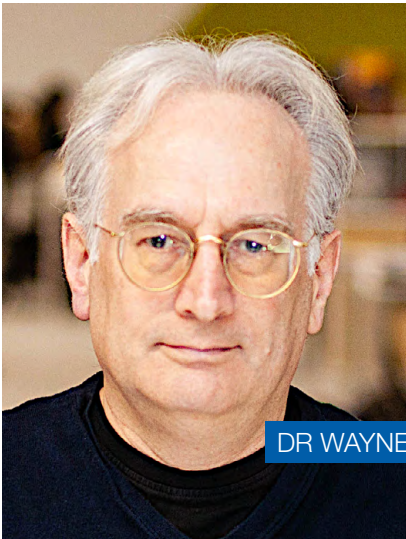


## AI in education and training:

excellence

versus

efficiency



© Wayne Holmes

DR WAYNE HOLMES

UNIVERSITY COLLEGE LONDON

“ *It is possible for AI to be used to support excellence in education and training. But we need a lot more work and we need the AI engineers to shift the focus of attention* ”

The role of artificial intelligence (AI) in promoting excellence in education and training is currently the subject of debate. Leading expert Wayne Holmes outlined what we expect AI to offer the education world in the coming years at a Cedefop webinar on teachers and trainers (see pp. 8-9). We caught up with him after the event to hear his views on AI and its importance.

#### How can AI be used to promote excellence in education and training instead of merely achieving efficiency?

The current examples of AI applied in education do not

promote excellence; they aim to promote efficiency. But there is potential for new tools to be developed over time. The way in which the tools currently work is focusing on skills, mathematics and basic functionalities, engaging the student with questions and answers; it's very instructional, it undermines student agency. We need tools that help students grow. At the moment, I don't think the tools do that. It is possible for AI to be used to support excellence in education and training. But we need a lot more work and we need the AI engineers to shift the focus of attention. To achieve that, people like us, those involved in education and training, need to engage, need to

push them, to say 'how can we make it better?'

#### How can we make the voices of teachers and trainers heard in the discussion about the role of AI? And what kind of intervention is needed in the corporate world that drives evolution in the sector?

It is important to engage teachers and trainers, but they also need to grab hold of the opportunity and say 'How do I, as an educator, take advantage of AI and help move it in the right direction?' That kind of conversation is quite difficult. Because the tools that are used in AI for foundational skills are run by multimillion dollar companies around the world. They are very



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good at marketing what they are doing, and policy-makers tend to listen to them. I'm not saying that any of those companies are doing bad things, but they are doing easy things, the low-hanging fruit. Teachers have got to take a critical attitude to the AI tools that are being brought into their classroom. Not just use them because it seems fun or exciting. If they don't really and genuinely support the kind of teaching you think is important, speak to your principal, speak to other teachers. We need to ensure that we speak with the ministries of education. For ministers, it can sound like a quick win: we can bring in the AI and it sorts everything. That just isn't true. Teachers need to be involved in that conversation.

**Cedefop is planning a survey of VET teachers and trainers. Do you think it can contribute to the issue of excellence and AI?**

It certainly has the potential to do that. It depends on the questions that the survey raises. But once the survey is complete, a next step is, what professional

development do we need to make available to teachers? What are they fearful of and excited about in AI? What do they know about AI and ways in which it will impact on teaching and training? Once we've got a clear picture of that, then it's about determining what ministries and other organisations need to develop to help teachers and trainers understand what these tools can do. What are the problems that they introduce? A survey is a good opportunity to understand exactly how teachers are feeling with respect to these new technologies coming into classrooms and training rooms. That's step one, but we also need step two.

**There is a lot of talk about AI replacing people, taking away jobs. Cedefop has been looking into this issue for some years now, as well. What kind of jobs are under threat in your opinion?**

Nobody really knows what the impact will be. There's a lot of talk about what's referred to as the hollowing out of the middle.

The jobs of people at the top of professions are probably safe, and the roles of people at the bottom, involved in doing hands-on things, are likely to remain. But those roles in the middle are being increasingly challenged. With regards to teachers and trainers, it is unlikely there will be an impact. However, we must remain aware. Companies always suggest that their tools are there to support the teacher: if it is seen as 'we can save teacher time', it is only another step to say, 'well, we can save teachers'. There is that possibility if teachers and trainers don't get involved in the conversation. In the broader world, one argument is that it's not whole jobs that are being automated, but tasks within a job. It doesn't mean we can have lots of people unemployed, but it could be that elements of their jobs disappear. Therefore, there will be some impact on them. ■

Watch the full interview  
with Wayne Holmes!



# Taking the pulse of

## VET teachers

## and trainers



*Cedefop's new survey aims to bring the voices of all parties to the discussion on what professional development should be made available to teachers and trainers*

In these times of unpredictable changes and challenges, caused by the coronavirus crisis, the EU is aiming to modernise its policy on vocational education and training (VET). It wants to reinforce the role of initial VET (IVET) in the lifelong learning continuum and support youth employability.

Quality IVET can help young people unlock their full potential. It can give them motivation to start (and pursue) their lifelong learning journey, moving from compulsory to further education. And it can prepare them for a successful work life by equipping them with the skills and competences they need. To do this, IVET should promote social inclusion, active citizenship, employability and entrepreneurship. Well-trained and motivated teachers and trainers, receiving constant support to acquire the skills and competences needed to master new challenges, are key agents in helping make this vision a reality.

### ESSENTIAL DRIVING FORCE

The central role of VET teachers and trainers has found new focus in the current EU policy discourse. So has the need for investment and for a systematic and holistic approach to their professional development. Recently adopted EU policy documents recognise teachers and trainers at all levels, and in all types of education and training, as an essential driving force for education and training. Their commitment during the coronavirus crisis has also been acknowledged.

VET teachers and in-company trainers are a diverse group, so requirements for practising the

job vary considerably among Member States. There is a lack of comparable information on governance and professionalisation frameworks for VET teachers and in-company trainers, and on their evolving role. More information is also needed on 'hybrid teachers', those working in parallel in VET institutions and companies. They can bring necessary innovation to the school-based environment and can address the growing shortage and ageing population of vocational teachers.

### BETTER DATA NEEDED

There is little comparable statistical data available on VET teachers and trainers at national or international levels. Our knowledge is also limited on the preparedness of VET school leaders to perform their role effectively; this often includes making decisions about managing and ongoing support of teacher professional development. Such poor data availability makes it impossible to provide a comprehensive statistical picture of the VET workforce and the challenges it faces. Although there are some useful surveys at country level, they are designed precisely for local/national contexts, do not necessarily focus on IVET and do not incorporate international comparative criteria.

Then there are the learners, the key beneficiaries of pedagogical approaches and a crucial target group in understanding the effectiveness of IVET pedagogies in achieving learning outcomes and driving the education and training process. VET learners can provide an important additional





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understanding of the effects of teacher and trainer participation in continuous professional development (CPD) on the learner experience. It is assumed that learner satisfaction increases with the level of teacher and trainer engagement in their own learning through CPD, but evidence, so far, is missing.

### INSIGHTS FROM THE FIELD

To tackle these issues, Cedefop's team working on VET for youth (see box) initiated a feasibility study

#### THE VET FOR YOUTH TEAM AT CEDEFOP

The team manages research projects and tools supporting young people's employability and participation in lifelong learning. Projects and surveys focus on **tackling early leaving from education and training**, and **teachers' and trainers' professional development for inclusive and high-quality initial VET**. Cedefop has developed practical tools and guidelines for policy-makers and VET practitioners working with young people at risk, such as the **VET toolkit for tackling early leaving**, supported by its ambassadors, and the forthcoming **VET toolkit for empowering young people not in education, employment or training (NEETs)**.



for launching a pan-European survey to collect data from schools and workplaces. It aims to survey the four key populations in IVET – school principals, teachers, in-company trainers and learners – combining providers and customers of IVET in a comprehensive approach. The study will provide insights from the field and help to understand strengths, weaknesses and needs in IVET. It will help build a robust evidence base for innovative and efficient policy-making at all levels and support the new EU policy actions.

Key stakeholders, including EU policy-makers, social partners, VET providers and civil society, as well as national representatives from the six pilot countries (Austria, Croatia, Greece, Lithuania, the Netherlands and Spain), gathered at a Cedefop webinar to discuss the topics such a survey could address and share knowledge on methodological challenges. Participants agreed that Cedefop's new survey aims to bring the voices of all parties to the discussion on inclusiveness, green and digital transitions in initial VET, and about what professional development should be made available to teachers and trainers in times of rapid change.

A future pan-European survey obtaining these insights will define IVET for this century's third decade and beyond. ■

More on the Cedefop webinar  
Making excellence inclusive:  
towards a new Cedefop survey of  
VET teachers and trainers



# Microcredentials: a labour market

## megatrend



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“

*A key policy challenge is to ensure that employers trust the value of microcredentials*

The digital age has given rise to a wave of massive open online courses (MOOCs) and, with them, a freshly coined term: microcredentials. This relates to limited-length online courses that lead to specific sets of learning outcomes and skills. Microcredentials are increasing in number but face crucial challenges: overcoming their relatively unregulated nature to gain the trust of learners and employers and having their value as a potent tool of lifelong learning universally recognised. Cedefop has launched a project that will provide a better understanding of the

role played by microcredentials in supporting labour-market-related and employment-relevant education, training and learning. The Agency's Head of Department for VET Systems and Institutions, Loukas Zahilas, and expert Anastasia Poulou talked to *Skillset and match* about the intricacies of this labour market phenomenon and the specific aims of the new study.

**The term 'microcredential' is novel but it may refer to long-standing practices, and that may add to confusion. Will you give us a clear definition?**

**AP:** There is currently no single, agreed definition covering the

term 'microcredential'. Differences exist among stakeholders on what to count (and not to count) as a microcredential; in many cases, they are seen as a by-product of the proliferation of MOOCs. Generally, microcredentials are a way to give visibility and value to predominantly shorter learning courses and/or experiences. Some see them as a way to recognise learning outcomes acquired outside education institutions, for example at work, and others see them as integrated parts of formal education and as a way to recognise smaller chunks (modules or units) of formal education and training. Working definitions have been created by various bodies

pointing to key characteristics of microcredentials but, still, it is not clear from these definitions, whether they represent a genuinely new form of recognition apart from their digital delivery.

**The coronavirus pandemic has brought microcredentials into the limelight. Does this signify a permanent shift as we move to more and more digitalisation of learning and work?**

**LZ:** It is expected that economic recovery from the coronavirus crisis will be accompanied by increased short-learning options. The pandemic has also accelerated the trend towards increasing digitalisation of labour markets and the automation of production systems. With technological change moving fast, the 2020 European skills agenda has paid much attention to targeted policies that can support the upskilling and reskilling of EU citizens. The surge in interest in online learning is observed across Europe and globally, with a wide variety of public and private stakeholders providing short learning courses in response to the need for more flexible, learner-centred forms of provision of education and training for lifelong learning. However, it remains to be seen whether this will signify a permanent shift in online learning.

**Is the unregulated nature of microcredential certifications a concern when it comes to their real labour market value? How could a framework be established that would inspire employer trust in such qualifications, similar to formal education?**

**AP:** In order fully to understand the microcredential phenomenon, there is a need to understand how the technology-driven



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growth in microcredentials and online badges interacts with existing certification systems serving enterprises, sectors and technology areas. A key policy challenge is to ensure that employers trust the value of microcredentials. Their portability and transferability largely depends on their visibility and perceived value to others, notably to education institutions and employers. This is a key aspect of traditional qualifications and an important aspiration of microcredentials. If there is no agreed value, if there are doubts regarding the issuing body and/or the acquired outcomes, a credential will carry limited weight and value. The new Cedefop study will attempt not only to identify the conditions for trusting microcredentials, as seen from the end-user, but also the extent to which a systemic and strategic contextualisation of microcredentials is taking place and the implications of this.

**So, what are the specific aims of the microcredentials Cedefop study?**

**LZ:** The study will provide a better understanding of the role played by microcredentials

in supporting labour-market-related education, training and learning. Its findings will offer new knowledge of the characteristics of microcredentials, their added value to individual learners and employees, as well as their impact on existing qualifications and recognition systems. It will seek to answer several main questions: how widespread are microcredentials in labour-market-oriented vocational and professional education and training and which are their main characteristics and functions; how do microcredentials differ from existing labour market certificates and qualifications and what are their main strengths and weaknesses; and can microcredentials be sufficiently trusted by individual learners, employees and employers to become building blocks ('currencies') for lifelong and life-wide learning? ■

Microcredentials:  
are they here to stay?



Cedefop project:  
Microcredentials for labour  
market education and training



# Next generation skills intelligence: why Europe needs it

*In times of rapid change, reliable, contextualised and well-communicated skills intelligence has enormous value*

Cedefop coined the term skills intelligence long before its full potential was widely recognised. To add to EU skills intelligence, the Agency has invested considerably in data collection, research and analysis – skills intelligence backbones – in recent years. In times of rapid change, reliable, contextualised and well-communicated skills intelligence has enormous value. It should not come as a surprise, therefore, that skills intelligence is at the heart of the 2020 European skills agenda and has become much more prominent in the post-2020 EU policy framework for vocational education and training (VET).

Because of digitalisation, the green transition and other megatrends, VET systems need to become more learner-centred, and VET and skills policies more proactive. Sound and trusted skills intelligence that is in sync with the future of work and education makes a difference. It helps new generations of learners see what it takes to start a career and supports people already employed in further shaping it.

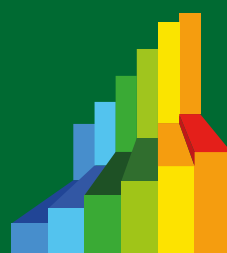
The contribution of skills intelligence to achieving education and skills policy aims is evident when looking at the experience of EU Member States. National skills intelligence systems have vitally contributed to strengthening feedback loops between the labour market, VET and skills development more widely; they have been a compass for policy-makers, experts, social partners and other key stakeholders.

Next generation skills intelligence is about helping citizens understand what is happening in the labour market and what that means for them. Making skills

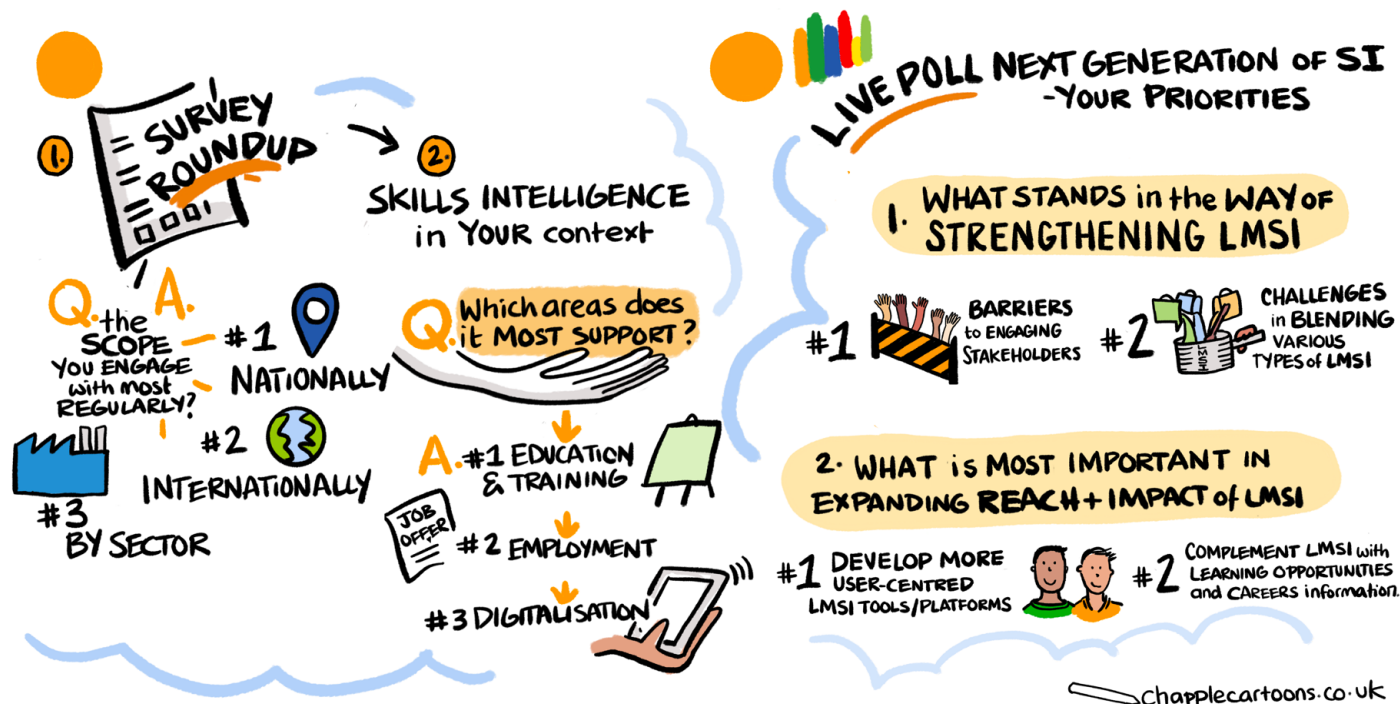
intelligence more accessible to citizens and the professionals supporting them (such as guidance counsellors) is what makes career management skills work. Our own estimates show how important that is. Even before the coronavirus crisis, over 45% of the adult population in the EU-27+ had low or outdated skills and potentially needed up- or reskilling. Skills intelligence helps make clear in which direction such skilling efforts need to go.

## A SKILLS INTELLIGENCE VISION

Cedefop's vision for next generation skills intelligence entails much more. Apart from being better communicated and customised to citizens' needs, it should also be more detailed, better contextualised and timelier. It is good to know which sectors and occupations offer career opportunities, but such information by itself is not very actionable. Information about skills (but not based on skills proxies, such as occupation or qualification level)



**Skills intelligence** is understood as the outcome of a knowledge-driven process of collecting, selecting, combining and presenting **evidence** – based on skills forecasts, skills surveys, big data analysis and other methods – **to map and anticipate skill trends.**



typically tops the wish list of guidance counsellors. Such information really helps individuals in making career transitions away from the ‘old’ economy and towards more digital and greener jobs. Apart from making clear what skills employers want, it is essential to give citizens insight into the skills they can successfully deploy in another occupation or sector and those they would need to develop further to make a transition.

Better information on career portals and labour market skills intelligence (LMSI) platforms requires innovation at the ‘back-end’, in terms of methods and analytical approaches. Following a more complex and dynamic labour market requires combining sources and methods of labour market and skills intelligence, careful consideration of different viewpoints and use of scenarios to take account of uncertainty. Much can be achieved by better exploiting the skills intelligence Cedefop already develops (skills forecasting, skills surveys, online job advertisement analysis, foresight and others), by exploring synergies and by more systematically combining insights and perspectives.

### TAKING STOCK, LOOKING AHEAD

Cedefop’s past skills intelligence work has helped strengthen VET governance and modernise VET. It has provided valuable evidence for policies aimed at building and maintaining employability for learners and workers, and competitiveness for businesses. The work has also helped raise the profile of VET

beyond education and training and employment policies, not least through the work on green skills and research on digitalisation, artificial intelligence and the future of work.

2021 is the year where we step up our efforts. A high-level Cedefop conference, in April, provided considerable new insight into skills intelligence in the context of megatrends (digital, green, demography and others) and showed how to maximise its potential for policy. The approach of actively engaging stakeholders proved extremely valuable. Their contributions stimulated creative thinking and contributed to successfully kick-starting Cedefop’s next generation skills intelligence work.

European Commissioner for Jobs and Social Rights Nicolas Schmit told the 230 participants: ‘The years ahead will be crucial and transformative for our society at large. We must make sure we take people along; up- and reskilling is about Europe’s competitiveness as much as it is about social fairness. Therefore, having the right information to optimise investment in skills remains a vital building block for our recovery. Cedefop’s work is extremely important since we will need to know what skills will be necessary in various growing sectors and various regions.’ ■

More on the Cedefop conference ‘Getting the future right – Towards smarter and people-centred skills intelligence’



# Short-term data for long-term job planning



© Cedefop/Sakis Gioumpatis

VLADIMIR KVETAN

CEDEFOP EXPERT

“ *The millions of online job ads collected in real time help capture new skills and even completely new occupations* ”

Identifying long-term tendencies in the demand for skills in the labour market is a cornerstone of policy formation, but Cedefop’s real-time labour market information platform serves as an early-warning system on short-term changes. These are critical in gauging the speed of change as well as spotting possible shifts from general trends. Labour market skills intelligence (LMSI) was featured in a Cedefop high-level conference in April (see pp. 12-13), and the Agency’s expert Vladimir Kvetan spoke to *Skillset and Match* about the benefits it brings to policy-makers, educators and citizens.

**Can you explain why LMSI is more crucial than ever in the times of rapid labour market change and disruption caused by the pandemic, particularly for VET policy-makers?**

As we know, the days when schools prepared people for a lifetime are over. Timely information about skill needs and trends is crucial in helping citizens reap the benefits of labour market opportunities and shape their careers in a rapidly changing world. Skills intelligence provides insight into skills supply and demand and labour market trends across different time horizons. Short-term and long-term intelligence are both important in shaping vocational education and training (VET) policies and for education

and training programmes. Analysing skills trends, using skills forecasts and foresight, helps us understand broad labour market megatrends. This is an important perspective for initial education and training, because a broad and holistic outlook is key to making young people fit for the future of work. Reflecting on short-term trends helps capture the speed of change and identify possible deviations from the broader trends.

**The coronavirus pandemic was an unforeseeable factor. To what extent has it altered the long-term trends for skills and VET?**

It’s too early to evaluate the full impact of the pandemic on skills and VET. What seemed at the



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beginning to be a short-term problem has now been here over a year. Even though vaccination is in full progress in many countries, the fight is not over, nor is it clear what the 'new normal' will look like. The first analyses by Cedefop, based on online job advertisements, show us how important digital skills have become. Apart from acting as a shield against lockdowns and social distancing measures, they are also the skills growing and emerging sectors need to embrace. The world of education is also changing rapidly. With many schools going online, digital learning really took off. The boost in younger cohorts' digital literacy will have positive spillovers in the future.

**Skills OVATE, Cedefop's real-time labour market information platform, collects millions of online job advertisements in all EU Member States. How does Cedefop make sense of the information and ensure the skills trends the system presents reflect reality? What practical advantages does real-time LMSI bring to policy-making?**

Cedefop has developed skills intelligence tools for more than a decade. Moving away from only studying occupations and qualifications, we have

developed a multilingual modular data system to analyse 'actual skills' demanded in the labour market, collecting online job advertisements in all EU Member States. These job ads contain much more detailed and granular information than conventional data sources such as skills surveys. Using online job advertisement data helps us understand what skills are important in occupations, sectors, countries and regions. The millions of online job ads we collect in real time also make it possible to capture new skills and even completely new occupations: such information has great value for policy-makers in education, training and employment. Online job advert analysis is most powerful when combined with conventional longer-term methods such as forecasts. And using Eurostat's web intelligence hub is a great platform for developing the work in the coming years.

**How can skills intelligence keep up with the speed of developments in the world of work? What is Cedefop doing for a new generation of skills intelligence? How can it add value to economies and societies?**

Understanding a rapidly changing world of work and coming up with adequate policy responses requires timely, high-quality and granular data. As the internet offers far more than just information on online job advertisements, Cedefop's experience in big data processing can be developed further. Data gathered from crowdwork platforms can give us vital information on the skills, jobs and new forms of work emerging in the 'gig' economy. Analysis of online CVs can help develop much better insight into how further education and training, non-formal or informal learning and experience may affect individual careers. Besides investing in new methods, to be impactful and useful for citizens, skills intelligence needs to focus on developing coherent stories based on multiple data sources and insights. I'm confident that by moving in these directions, Cedefop's skill intelligence work in the coming years will contribute to meeting Europe's pressing skills challenges. ■

Cedefop's Skills OVATE:  
skills online vacancy  
analysis tool for Europe



# Health professionals

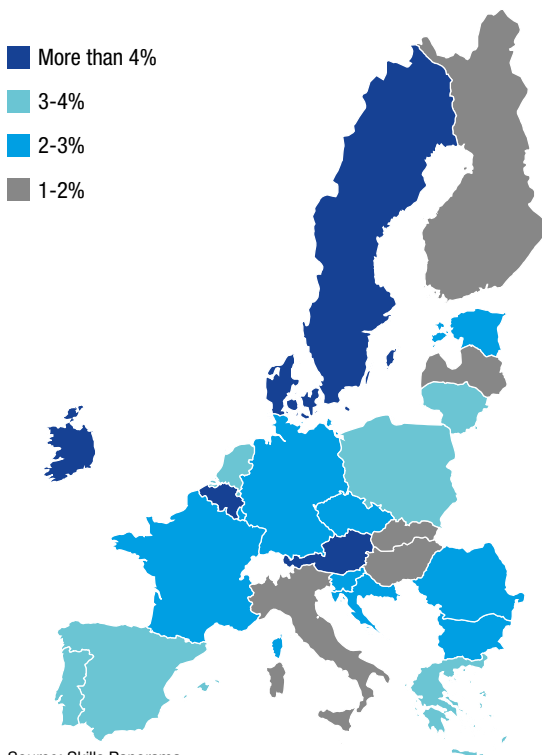
Health professionals – in particular doctors and nurses – took centre stage in 2020. Seeing them fighting tirelessly on the frontline against Covid-19 made society aware of how important their work is. Many tragically lost their lives while caring for the sick and dying across Europe. Few emerged from the crisis unscathed as the physical and emotional stress they endured has long-term impact.

While doctors and nurses are an important part of the European workforce, their share in employment varies considerably. In Hungary and Slovakia, they account for 1.6% of employment. The corresponding figure for Denmark and Sweden, countries with rapidly ageing populations, is 5%.

Before coronavirus, jobs for health professionals were little advertised via online job portals. The healthcare crisis has changed that. Cedefop's skills OVATE database shows that at the peak of the pandemic's second wave, online job advertisements for medical doctors (+63%) and nurses (+44%) surged compared to a year earlier.

## Health professionals in the EU

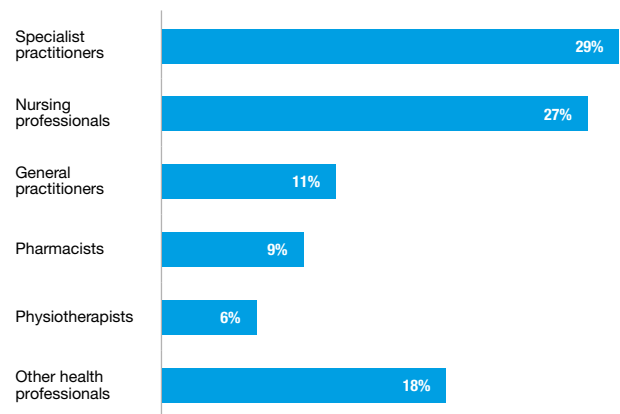
Share of total employment across countries (2019, in %)



Source: Skills Panorama.

## Health professionals in the EU

Jobs offered in online advertisements (2020)



Source: Cedefop skills OVATE.

## HEALTH PROFESSIONALS

- 5.6 million in the EU (2019)
- 69% female
- 36% 50 years or over
- 3.4 million job openings until 2030

The demand for health professionals is also rising from a longer-term perspective. Cedefop forecasts 3.4 million job openings for doctors and nurses until 2030. With Europe's population growing and ageing, more than half a million new health professionals will be needed to meet the increasing demand for medical services. In addition, almost 2.9 million retiring health professionals will need to be replaced this decade.

The combination of an unprecedented health crisis and a structurally growing demand for medical services is one of Europe's greatest skills challenges. Responding should be a top priority for education and training policy-makers. ■

Learn more about health professionals



Cedefop skills OVATE webtool analysis







The Greek Government has set a strategic objective to upgrade vocational education and training (VET) from a forced solution for a few, to a conscious education and career choice for many. A new legal framework regulating the VET and lifelong learning system in a more systematic, comprehensive and cohesive way has been adopted by Parliament.

**The main pillars of the new framework are:**

- the joint strategic planning of VET programmes to avoid overlapping and achieve optimum results addressing the needs of the Greek economy;
- the upgrade of upper secondary vocational education schools (EPAL) and post-secondary vocational training institutes (IEK) in terms of curricula, technical equipment and teacher training;
- the creation of model vocational schools and pilot vocational training institutes;
- the active participation of social partners in the design and implementation of the VET system;
- the introduction of labour market diagnosis and tracking systems for VET graduates;
- the certification and validation of non-formal and informal learning;
- the introduction of early career counselling and vocational guidance, as well as opportunities for internships with local businesses.

Big changes  
ahead for  
VET in



In the fiercely competitive era of the fourth industrial revolution, rapid technological developments devalue existing skills and create a need for new ones. In Greece, these challenges are superimposed on the problems created by a decade-long economic crisis, which led to unprecedented levels of unemployment. An effective, modern VET system is crucial to achieving up- and reskilling in the Greek labour market.

VET is not considered a popular education choice nor a solid career pathway in Greece. Despite the measures taken to strengthen governance and set up a skill forecasting system to guide the development of VET provision, there is still a long way to go. The main idea behind the new legal framework is fundamentally to change this situation for a better VET and lifelong learning system.

Over the years, Cedefop has closely collaborated with Greek governments in supporting VET developments. The new law foresees a Central Scientific Committee; Cedefop's Head of VET Systems and Institutions Loukas Zahilas will be part of this advisory body. ■



by REFERNET  
GREECE

# Adult learning:

## it's better than you think



*The experience of participating in, and looking for information about, adult learning and training influences perceptions of quality*

There is a saying that 'experience is what you get when you don't get what you want'. However, this does not seem to be the case with adult learning and training. Adults' experiences of participating in organised (formal and non-formal) adult learning and training are positive to the extent that they change people's perceptions of just how good they are. The availability of learning and training opportunities, as well as the ease of finding information about them, also appears to play a role in how adults see their quality.

Cedefop's latest opinion survey finds that, across the EU, almost 7 in 10 adults think that the quality of adult learning and training in their country is good: 11% say it is very good and 58% fairly good. Some 24% think that the quality is bad, with 5% saying it is very poor and 19% fairly poor (see figure).

### THUMBS UP FOR QUALITY

In all countries, according to the survey, people are more likely to describe adult learning and training as good rather than bad, whether or not they had participated. The exception is Italy where 43% say it is good and 48% poor. People are most likely to say that adult learning and training are very good in Malta (58%), Ireland (30%) and Austria (23%). On the negative side, a third or more of adults rate the quality of adult learning and training in their country as at least fairly poor in Italy (48%), Greece (40%), Croatia (35%) and Spain (33%).

However, among those who had participated in the previous year, 93% of adults in Italy say that

their learning and training are good, of which 38% say it is very good; only 8% say it is poor. Adults saying that learning and training are poor are also substantially lower in Greece (6%), Croatia (9%) and Spain (7%).

### STUDENTS LESS HAPPY

As well as across countries, the survey found that perceptions of the quality of adult learning were generally consistent across different groups who had participated. However, students (29%) are less likely to say that their recent organised training was very good, compared to those in work and those looking for a job (both 40%). For those who participated, perceptions of the quality of adult learning and training are similar across all occupation groups, with those in the armed forces (49%) and professionals and services and sales workers (both 42%) most likely to rate their experience as very good.

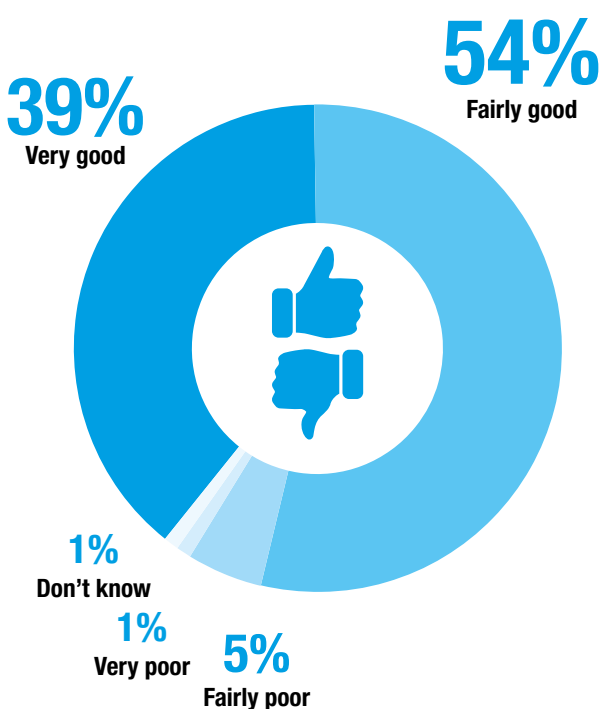
It may be that perceptions about the actual quality of adult learning and training are also influenced by information and opportunities. Across the EU, 72% of all respondents (those who had participated and those who had not) agree that there are many adult learning and training opportunities in their country. However, perceptions of the availability of opportunities are below the EU average in Italy (52%), Spain (60%), Greece (63%) and Croatia (67%), countries with relatively negative views about the quality of adult learning and training.



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### Rating of organised training activity

Thinking now of your most recent organised training activity, how would you rate it overall?



### OPPORTUNITY IS KEY

Further, 82% of all adults who regard the quality of adult learning and training as good say that there are many opportunities for them in their countries, compared to only 49% of those who regard the quality as bad. Respondents positive about the quality of adult learning and training (76%) are also much more likely to say that it is easy to find information about those opportunities than those who see the quality as bad (44%).

The survey indicates that the experience of participating in, and looking for information about, adult learning and training influences perceptions of quality. This argues that measures assessing the quality of adult learning and training should consider not only content, but also ease of access and the reliability of information about them. Positive experiences, inevitably, influence perceptions and, in turn, motivation. ■

Cedefop's second opinion survey:  
Perceptions on adult learning and  
continuing vocational education and  
training in Europe



# Cedefop's

## audiovisual history

### gets new life **online**

“ *Selection depends more on a human element, looking at the stories that are conveyed, beyond the simple factual content* ”

Earlier this year, Cedefop became the first EU Agency to have audiovisual historical material available online through the Historical Archives of the European Union (HAEU). Still images, audio and videos from past decades were dug out of Cedefop's archives and transferred to Florence, where the HAEU is based, to be digitised and made available to all those interested. The people behind this work tell us more.

#### **Cedefop historical archives and digitisation project**

**Marc Willem, former Head of Library and Documentation, Cedefop**

Cedefop was established in 1975 in response to the economic and social challenges of the early 1970s, and was based in, then, West Berlin, Germany. In 1995 it relocated to Thessaloniki, Greece. In 2002, Cedefop was the first EU agency to deposit its historical archives in Florence. The first transfer of

archives comprised the documents produced by its Bureau and Management Board from 1975 to 1995. When Cedefop moved to Thessaloniki, documents and boxes arrived as orphans, as some of the staff did not accompany the move. In 1999, I took the initiative to organise selected records in a new archives service. The Directorate used to microfilm all Board meetings and, when we transferred the first historical archives, we decided to digitise them. The digitised minutes of the meetings became *de facto* an important online resource for researchers interested in the role of the first generation of EU agencies in the construction of the European Union.

#### **Selection of audiovisual content with historical value**

**Robert Stowell, former Archivist Records Manager at Cedefop**

The historical value of audiovisual material is less tangible than that of purely textual records. Selection



depends more on a human element, looking at the stories that are conveyed, beyond the simple factual content. Presentations from the early 1980s, with arresting graphics that might now be considered 'retro', illuminate the spirit of Cedefop's activities during that period in a way that published activity reports do not. Photographs of early Management Board meetings (in which some participants are smoking!) give us a peek into another era. One of the most interesting video records is a recording made by the former Head of Administration, Marino Riva, who visited Thessaloniki in 1994 and made a home video of the city to be shown to staff back in Berlin upon his return. Footage at the end of the recording, of downtown Thessaloniki, provides a fascinating glimpse of the city at that time. Although not a direct record of Cedefop's activities, it provides background; it helps paint the picture of the 'Umzug' and the dramatic change of the late 1980s and early 1990s, with the Agency moving within a few years from Cold War West Berlin to the pine trees and bustling streets of Thessaloniki, a vastly different environment.

### Digitisation of audiovisual materials at HAEU

**Juan Alonso Fernandez, Audiovisual archivist at the HAEU**

The Cedefop audiovisual collection is composed of 669 35mm slides, 263 photographic prints, two audio cassettes and 72 VHS video cassettes. All material was digitised in-house at the HAEU. This presented some challenges, as some of the material exists on storage media no longer in common use, and several items had suffered some degradation and had to be handled carefully to avoid further damage and data loss. For the photographs and slides, we used a digitising station based on a full frame overhead camera with a continuous lighting system. A lower-resolution version, primarily for posting online, was created for each file. To digitise audio and video we used analogue players connected to the computer through composite audio cables and video grabbers.



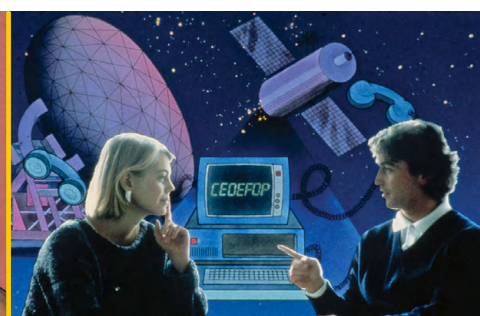
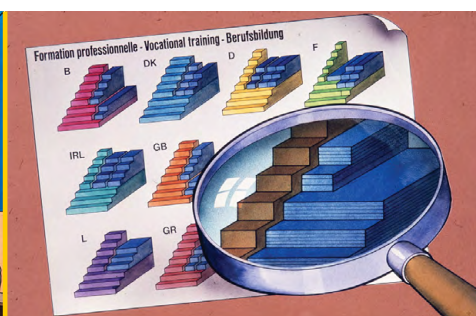
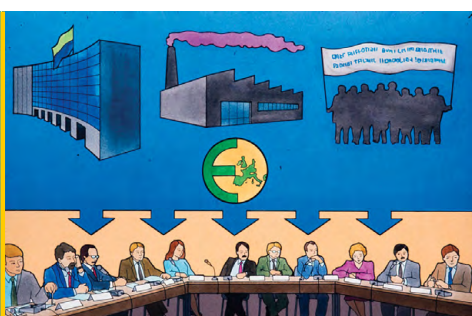
The digitisation process was successful and we were able to generate high-quality digital versions of most of the material.

### Online dissemination and long-term preservation strategy

**Samir Musa, Electronic Records Manager at the HAEU**

Due to its high historical value, the HAEU has put in place a consistent and broad long-term digital preservation strategy. The Cedefop collection represents the entire range of audiovisual material (audio, still and moving images) and hence needed different digital formats and technical and description metadata sets to make the content available for preservation and consultation purposes. The Cedefop materials date back more than thirty years and, according to EU Archives regulation, the HAEU could publish this content on the historical archives online inventory and make it available to interested citizens, particularly the research community. The HAEU also granted Cedefop the right to access on request the archiving information packages which consist of the original preservation digital format and the complete metadata sets. ■

Cedefop's audiovisual collection at the Historical Archives of the European Union website (registration is required for access)



# new

## CEDEFOP PUBLICATIONS



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### IN FOCUS

#### CEDEFOP: RISING TO THE CORONAVIRUS CHALLENGE

Cedefop's response to the coronavirus crisis meant adapting to the pressing needs of an unprecedented emergency and delivering added value when it was most needed. From day one, Cedefop brought together European countries and education institutions, providing them with a platform for sharing knowledge and experiences. It has been monitoring the impact of Covid-19 on Europe's economy, labour market, workforce and education systems, providing invaluable data and analyses to help guide policy-makers as they prepare for a new reality. Continuing operations without disruption and safeguarding the wellbeing of its staff has also been at the heart of the Agency's crisis management.

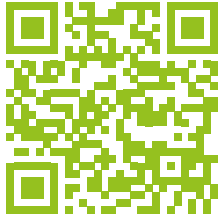


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#### OTHER PUBLICATIONS:

- Briefing note – The EU's port of call for VET
- Briefing note – Empowering people to cope with change
- Career guidance policy and practice in the pandemic
- Overview of national qualifications framework developments in Europe 2020
- Financing apprenticeships in the EU
- The next steps for apprenticeship
- The role of work-based learning in VET and tertiary education
- Vocational education and training in Portugal – Short description
- Spotlight on VET Portugal
- Strengthening skills anticipation and matching in Bulgaria

# coming up



For the latest information on what's coming up, go to [www.cedefop.europa.eu/events](http://www.cedefop.europa.eu/events) or scan this QR code

## IN FOCUS

# COMPARING VET QUALIFICATIONS



18 JUNE

WORKSHOP (VIRTUAL)

The workshop will present the final findings of the Cedefop project *Comparing vocational education and training qualifications: towards a European comparative methodology*. Seeking to develop a robust and scalable methodology for comparing and analysing the content and profile of qualifications, the project findings are relevant to a wide range of purposes and stakeholders. The workshop will gather international experts and researchers working on comparative methodologies from different angles. Participants will discuss ways to strengthen the feedback loop between education and training and the labour market, so providing a better link between the supply and demand of skills and qualifications.

## OTHER EVENTS

SEPTEMBER	<b>16</b>	VIRTUAL EVENT	Fourth meeting of Cedefop's community of experts on apprenticeships
OCTOBER	<b>21-22</b>	VIRTUAL EVENT	Joint Cedefop-OECD Symposium on apprenticeships for greener economies and societies
NOVEMBER	<b>17-19</b>	VIRTUAL EVENT	Annual plenary meeting of Cedefop's ReferNet, the network of institutions providing information on national vocational education and training systems and policies in the EU Member States, Iceland and Norway



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