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Authors: de Viron, F; Filloque, J-M; Baert, H; Cosemans, A; Moorthamer, L; Kinke, K; Städler, M; von Zobeltitz, A; Blochberger, E; Chakrabarti, S; Scalzo, K; Berge, R A; la Grange, E; Gazi, Y; Gutierrez-Mercado, R; Schrey-Niemenmaa, K; Norgaard, B; Sjoer, E; Royo, C; Uras, F; Daale, H; Hörr, B

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Professor Françoise de VIRON

President of euцен

Présidente du Master en Sciences de l'Education (FOPA). RIFA/GIRSEF Recherche en Socialisation, Education et Formation/IACCHOS. Université catholique de Louvain (BE)

Welcome

On behalf of the Steering Committee of euцен it is a great honour for me to welcome you to this, the 49th Conference of euцен. The conference is dedicated to ***University Lifelong Learning and the labour market in Europe - The contribution of continuing education and vocational education to the challenges of changing work and qualifications requirements.***

The fast-changing labour market requires efficient ways of up-skilling and re-skilling in the whole Europe. The conference deals with the question of which role euцен as one important stakeholder of Vocational Education Training (VET) and Professional Higher Education (PHE) can play. The Conference will discuss the different European models of CE and VET as contributions for the challenges of the labour market. This topic is the top of the wave for the moment. It crosses LLL, adult learning, HE, VET, Teaching and training.

Germany is probably the best place to reflect, discuss, exchange experience on this topic. The system of vocational education is perhaps the most important component of the German model, and is still very prevalent in the German educational system. German Higher Education institutions (universities of applied sciences and universities) have a lot of experience in dual studies - a specific German model

Therefore, on behalf of euцен, I would like to thank very much, the University Johannes Gutenberg of Mainz for hosting this conference, the President of this University, Professor Krausch and the authority. In particular, I would like to thank Dr Beate Hörr, Director of the Academic Continuing Education Centre of this university, and her team, the whole organising committee of the conference for the preparation. We all know that it requires a considerable amount of work.

I thank also the scientific committee of the conference, who read and commented over 30 papers and posters, which proves the interest in the subject.

I wish you many fruitful discussion during this conference. Please be imaginative!

PROFESSIONAL AND ACADEMIC, OPPOSITE CONCEPTS? THE FRENCH APPROACH FOR FILLING THE HYPOTHETIC GAP

Dr FILLOQUE Jean-Marie

Former Vice-Rector for LLL and academic affairs of the University of Brest

Former President of the French National Network of UCE departments (CDSUFC)

Member of the CNEE-National Council Education-Economy

ABSTRACT

Based on the French context of Higher Education, professional training / skills development and employment / active life, this keynote paper shows the impact of successive regulations (laws at national level) on the links between these three “worlds”. It is important to note that the concept of lifelong learning is used now as a common framework in these three contexts. This presentation uses a time line starting in the sixties and focuses on universities. It shows the progressive convergence of the higher education system and the “world of work” over this period.

The paper takes into account only the question of education and training, but it's clear that the questions of research and its valorisation are also of great interest for universities, and can raise more or less the same questions about their objectives, ranging from completely theoretical to market oriented.

This paper takes the historical point of view up until the current day, but it's impossible to say today what will happen next with the new French government elected in May 2017. Its programme proposes many important reforms of the whole system of education, including higher education, professional training and professional development.

INTRODUCTION

The question of the relationship between the University and the labour market is a matter of debate today. There are several reasons for this, but the main ones are widening access to Higher Education and the rapid changing of the skills required to perform in the labour market. This first factor increases the number of graduates looking for a job, while the second factor increases the skills mismatch and thus the need for re-skilling or up-skilling of more individuals. Each country has its own educational system based in its own history and depending on the balances of power, but also on the convergences, between the different

stakeholders like social partners, politicians, NGOs, academics, etc.



In France, like in many other countries, the traditional debate concerning Universities and Higher Education in general is concentrated on the roles and missions of the institutions: must they offer students specific qualifications required by the labour market (professionally oriented) or must they prepare students with more general capacities (academically oriented)?

Observing the French Higher Education system, we propose an analysis based on the national regulations and their implementation. Starting from the law issued after the student strikes and general unrest of 1968, we can identify several steps bridging the gap between the two “worlds”, the professional one and the academic one. However, the situation is not yet clear. This law has introduced the words “professional” and “economic needs” in the regulations, both for initial studies and for “adults” returning to university, and generalized the creation of technological institutes inside the universities. The following steps have formalized the management of university continuing education in the context of labour laws (1972, 1984). In 2002, the introduction of the “VAE” process together with the description of diplomas using learning outcomes and skills competencies at all levels have produced a kind of “shock therapy” to the academic community and started a slow but real evolution of the institutions.

The last steps in 2007 (introduction of mandatory publication of “professional insertion” or graduate employment indicators) and in 2013 (introduction of the words “Lifelong learning” in the missions of universities) have strengthened the links between universities and the socio-economic environment. Considering the objectives of the new programmes which are more “skill oriented”, considering the “professional insertion of graduates” used as performance indicators, considering the market share of continuing education and the development of work-based learning for bachelor and master degrees, etc., the question today could well be: “are universities VET providers?”.

We will discuss the answer weighing these socio-economic objectives and constraints against the claimed (and legally based) independence and autonomy of university teachers/researchers, which is intended to guarantee creativity, innovation and ethics.

WHAT IS REPRESENTED BY THE WORDS “ACADEMIC” AND “PROFESSIONAL”?

Academic, professional ... what are the images that come to your mind when you hear these words? It could be objects like mortarboards or diploma parchments for “academic”, and tools like a wrench or a computer for “professional”, although today this latter tool is used in almost all life situations. It could also be persons in certain situations: a graduate for “academic” and perhaps builders for “professional”, but also a businessman or doctor ... for “academic”, it could also be a teacher.

These are only images, but they match, in a certain way, with the usual understanding of what is an academic qualification and what is a professional qualification. Academic is connected with knowledge, studies. Etymologically, it comes from the Greek “*akademos*” connected with the cultural accumulation of knowledge, its development and transmission across generations and its practitioners and transmitters. Professional is connected with the world of work, jobs, and employment. A classical (or a common) definition for these qualifications could be: an academic qualification involves the study of a subject with an academic discipline and (hopefully) research focus, while a professional qualification enables the learner to apply the knowledge acquired in a practical manner, in professional practice.

The acquisition of these qualifications and their recognition, in most countries, are done by different institutions; on the one hand, those dedicated to academic studies like colleges, lycées, faculties and universities, and on the other hand, those dedicated to vocational and professional studies like training centres, polytechnics, professional schools ... Hautes écoles, Fachhochschule, etc. In each country, the organisation of the educational system depends on historical issues like the balance of power between the different stakeholders (who could be the social partners, politicians, NGOs, academics, etc.).

Are the learners able to find a job, or generate their own economic activity or employment, with these qualifications? What are the expectations of society toward their educational system? These two questions find different answers depending on the national contexts. In some countries, these two notions are strictly separated but, in all cases, at the end of the day learners have to earn money to live, so they have to work, regardless of the type of qualification they have. The two kinds of qualification are becoming more and more mixed, and in the end, even for very high-level theoreticians, the holders of these qualifications have a job (or would like to have one).

The next section gives some background on the French context around higher education, professional training/skills development and employment/active life. Then, starting in the sixties and following the time line, we extract the main elements of the successive regulations (national laws) concerning either higher education or professional training that have progressively built links (bridges) between the “academic” world of universities and the word of work.

THE FRENCH CONTEXT

In France, there is more or less the same separation between “general education” and “professional and technical studies” as there is in other countries for those qualifications lower than Level 5 (EQF), but with some bridges between the two. It’s not the subject of this presentation, but it is at these levels that the impact of the socio-economic situation of the families has the greatest importance: the lower it is, the more chances the individuals have to undertake a professional qualification. At these levels, professional studies include apprenticeships.

From level 5 to 8, the situation is more complex and this is the subject of this paper. The question of qualifications is shared between institutions in different ways depending on the professional sector, the level of qualification and the stakeholders.

Figure 1 gives the evolution of the number of active persons (in millions) according to their level of qualification between 1980 and 2014.

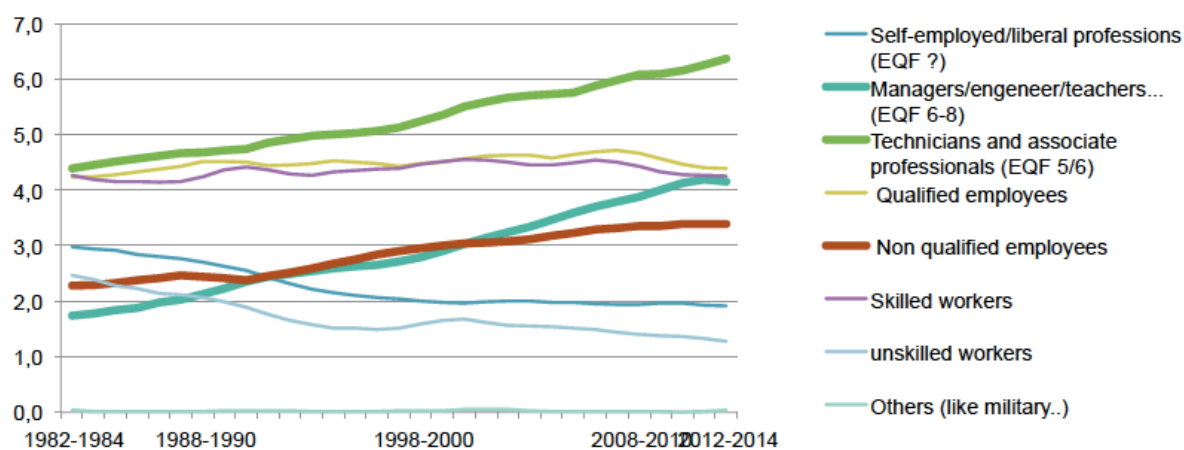


Figure 1: evolution of the number of active persons per category of job

Source: DARES, Ministry of labour, 2017[1]

The number of persons working towards a higher-level qualification has increased constantly over the last 35 years for jobs at Level 5/6 (in green: technicians, for example) and at Level 6/7 (in blue: management, engineering, etc.). The only other category that increases at the same intensity is “non-qualified employees” (in brown). This survey shows the rising demand

for higher qualified individuals.

Figure 2 gives the evolution of the share of the population with a higher education degree since the beginning of the century.

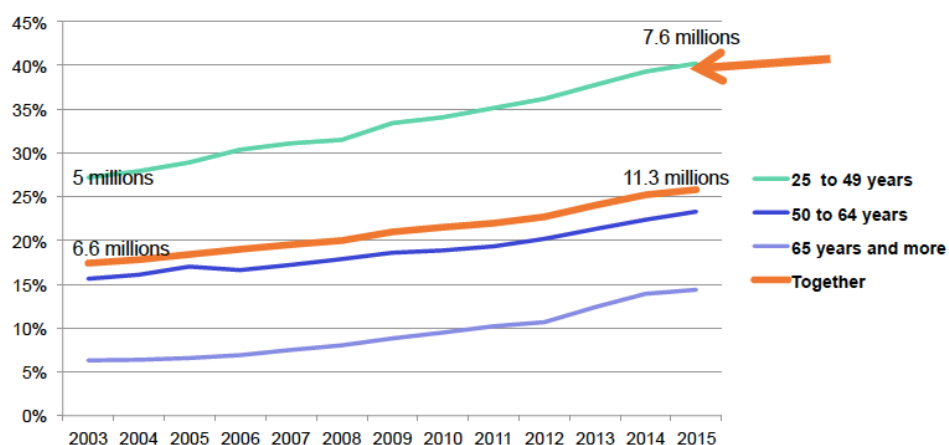


Figure 2: Evolution of the number of graduates (≥ EQF 5) in the population

Source: DEPP, Ministry of higher education [2]

At the same time, the proportion of citizens with a HE diploma (EQF Level 5 or higher) has also increased regularly, and in 2015, more than 40% of those between the ages of 25 and 49 were graduates. Considering the total population over 25, 11.3 million or 26% of this population had a degree, an increase of more than 70% over the previous ten years. Universities graduate a majority of these, and most of them are working, if we consider the annual surveys of graduate employment published by the universities and the ministry.

The Higher Education system has to generate enough graduates to fulfil the needs of the country and of the economy (Figure 3). The choice made in France in the early sixties was to increase dramatically the number of young people accessing higher education.

In 2016, 78.6% of a generation (633,497) have obtained the *baccalauréat*: 40.4% the *baccalauréat général*, 15.7% the *baccalauréat technologique* and 22.6% the *baccalauréat professionnel*. Seventy-five per cent (75%) of them continue to higher education, 55% directly to university, i.e. 400,000 new entrants each year! Since 1960, the number of students registered each year has increased regularly and is now over 2.5 million, with over 62% of these attending the universities.

At this point, the main findings are:

- A majority of each French generation study at university
- A majority of HE diplomas are delivered by universities
- Most university graduates find a job / work

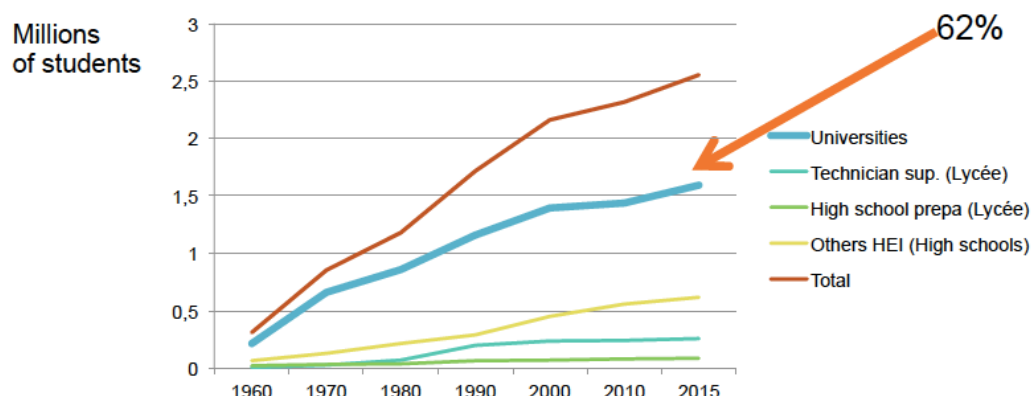


Figure 3: widening access to higher education: evolution of the number of students/year

Source: DEPP, Ministry of higher education [2]

It's important to add that today 8 - 10 % of registered students are adults returning to study and using all the provisions offered by the French adult education system. So, the questions are: how have academic and professional qualifications progressively been mixed to produce (or to try to produce) "skilled graduates"? And, given that French universities are open to adult students, is it a strategy for promoting lifelong learning?

We will try to answer the first question in the next section. As to the second one, it's absolutely certain that it is not a deliberate strategy, but it has enabled the possibility to develop a real culture of "adult education" in the universities, though still far from a real lifelong learning strategy. Recent initiatives and developments supported by the Ministry can be considered as a logical consequence of this evolution (Filloque et al., 2016).

THE TIMELINE OF CONVERGENCE

The timeline starts in 1966. It is schematic as it doesn't include all the events concerning our subject, but only the main ones as some others are not so important for our purpose here.

In the past, and maybe still for some individuals or organisations, higher education and, mainly, universities, did not have many connections with the world of work. But today, even with more autonomous Universities, things are changing, mainly because of the context described previously.

For some years now, one of the main public performance indicators of the universities, together with research indicators, is graduate placement / employment. The capacity of the universities to build agreements with companies, NGOs, sectoral organisations for research contracts, but also for developing new programmes (adapted to the needs of the job market) is also highlighted across their communication.

Even before our timeline begins, one can find specific older forerunners. We can cite, for example, the CNAM (National Conservatory of Arts and Crafts), which was opened for adults in 1794 (18th century, during the French revolutionary period). It is still active as a public national HE Institution and is one of the most important higher education organisations for professional and adult education. Another initiative was taken in the early fifties (1951) by some far-sighted and innovative professors. They created, close to universities, some IPST (institutes for higher social promotion of work) in Grenoble, Nancy, Lille, Toulouse, etc. Most of these are now closed, and included in the UCE departments, but they prefigured the actual university centres for continuing education.

Figure 4 brings together the main dates that are significant for the timeline and for the two main groups of stakeholders involved in the national strategies of the two “worlds”.

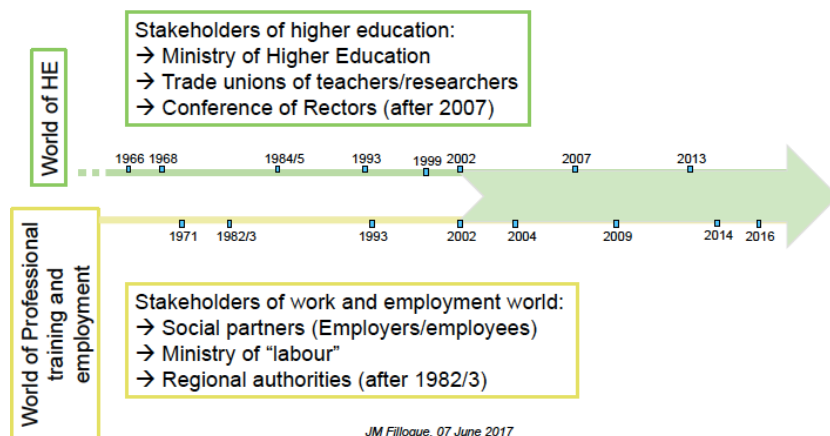


Figure 4: Timeline for a convergence

On the one hand, HEI organisation and strategy at national level is shared between three stakeholders: the Ministry of Higher Education; the trade unions of teachers/researchers; and the Conference of Rectors (after 2007). Nevertheless, universities, as public institutions, are financed by the state, and so have to follow national regulations. They have complete “pedagogical” autonomy for a long time (independence of professors) but their administration and management are under control. Over the last 50 years, they have acquired more and more autonomy to build their own strategy, but it’s a slow process.

On the other hand, vocational/professional training (intended more for adults than for youth in initial education) has its own organisation, mainly defined (until now) by negotiations and agreements between the social partners and the Ministry of Labour. Since 1982, and the decentralisation laws, regional authorities have taken a more and more prominent place in the discussions.

We will now follow the history of these two groups of actors, the actions they have put into practice, and the laws and regulations they have initiated and implemented.

The first important event in this short history is the creation of the IUT (Technological Institutes) by a decree in 1966. It’s important to note that in this time (before 1968), universities had no real power. Only faculties, all autonomous, could organise studies and research and each Dean had a lot of power, engaging in direct discussions with the Ministry. It was the end of the “*thirty glorious years*” (the years of reconstruction following the Second World War), and France was then facing a major shortage of technicians and intermediate managers for industry and services. This is why the French government decided to create new faculties, dedicated, for the first time, to technology and professional needs, but linked with theoretical studies. In many towns, traditional faculties and professors tried to refuse these creations, with the argument that it was not the role of university to train technicians, but they lost the argument and many institutes were created on the model of US “junior colleges” and “community colleges”¹. It is the first example of higher education institutions mixing professional issues and theoretical studies: internships, professional training for teachers, practical activities².

¹ <http://fresques.ina.fr/jalons/fiche-media/InaEdu01803/la-creation-des-instituts-universitaires-de-technologie-iut.html>

² In 2016, IUTs have 116,000 students (i.e. 7.3% of the students). IUTs deliver a diploma at EQF level 5, and access in first year is by selection.

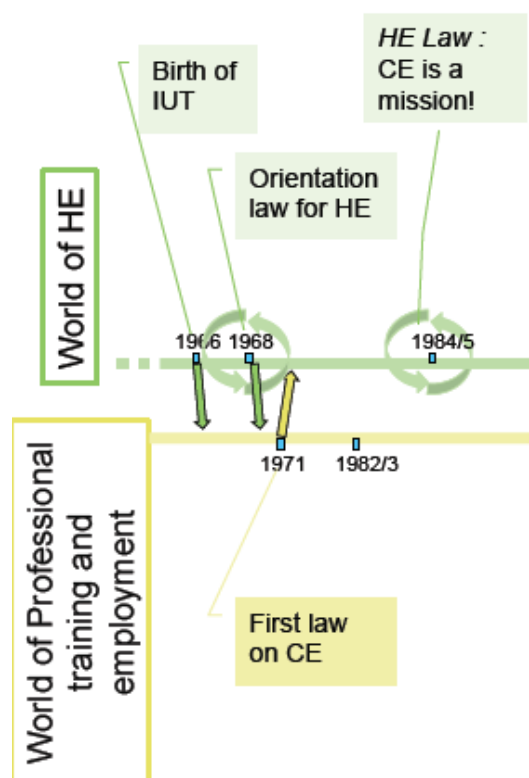
After the events of 1968, a huge reform of the universities was started. One of the main decisions was the creation of new universities, subsuming former faculties which thus lost their autonomy. Universities were now defined by law as “scientific and cultural public institutions” with specific new missions as well as education, research and the creation of knowledge. For example, they now had to:

- “Provide” managers and high-level personnel in all sectors;
- Participate in social and economic development;
- Participate in adult education; and
- Open access to higher education.

This law had an important internal impact (in universities) but it was also to have an impact on the country and the economy, opening the doors of higher education to an increasing number of people, young and less young.

In the timeline of professional education and training, the most important law (the so called “Delors law”) was passed in 1971 under the umbrella of the Ministry of Labour after several rounds of negotiations and an agreement between the social partners. It built the structure of Continuing Education in France, organising the financing schemes, the governance, the stakeholders and the training possibilities, and opening training activities to the market. At this time, the Ministry of Higher Education decided to be an actor (a kind of provider) in this newly opened market, but universities were free to be active or not. The first UCE departments were created in 1972 in some forerunner universities, and the ministry gave special funds to develop experimentation and pilot programmes. The law authorized the

public service of HE to be involved in this specific “private market”, but this implied some problems of competition with other private operators but without really modifying the rules.



In 1984, at the beginning of the first socialist government, a new law was to reform HE, but in the continuity of the 1968 law. The main developments linked with our subject were:

- Higher Education becomes a “public service of HE” and includes Universities, high schools;
- The word “professional” is added to the status created in 1968 which now becomes “professional, cultural and scientific public institutions (EPCSCP)
- “Initial and continuing education” becomes the first mission of higher education.

At the same time a decree organised and structured university continuing education activities in the framework of the law on CE, and another one (initiated by J. Delors) created one of the first RPL processes for exemption of exams (VAPP) in higher education.

The impact of this law and its decree was mainly internal at first, but then CE becomes more “official” and will lead universities to new relationships and partnerships with economic actors: enterprises, organisations, “clients”,

The next step will be in 1993, when a decree authorises apprenticeship (and so Work-Based Learning) for HE, opening the doors for closer relations with companies. This event had little effect on universities at the beginning, but the increasing number of students in apprenticeships and the number of programmes opened in WBL is now very important, and shows that it is a real opportunity for students but also for companies. Figure 5 shows the evolution of the apprenticeship contacts through the numbers of students signed up each year by level of qualification. It's very interesting to see that the EQF Level 7 numbers have grown so quickly both for Masters degrees and Engineering degrees.

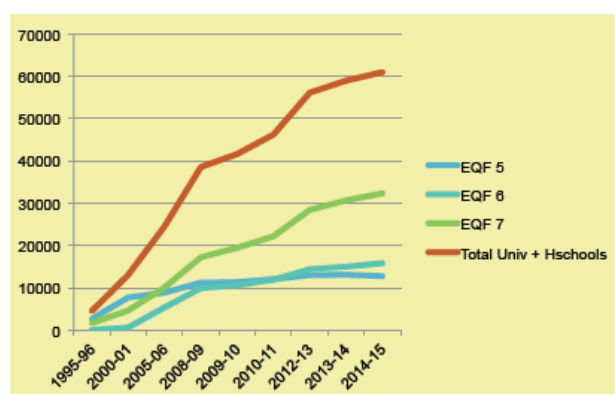


Figure 5: The evolution of the number of students in apprenticeship in universities

Source: DEPP, Ministry of higher education [2]

Since 2000, we have to add another way to organise Work-Based Learning called “Professional Contracts” which was also opened to HE. In 2014-15, this concerned 29,500 students, most of them at Level 6. This has had a great impact on the professionalization of universities and the building of bridges between universities and the business world.

In 1993, the first law dedicated to RPL was adopted, and a decree covering the diplomas of our Ministry published (which also covered degrees in the areas of agriculture and sport). This law allows the validation of professional experience to obtain credit for components of a qualification or a “professional” diploma. The procedure is based on a portfolio, and professionals can be members of the juries. Universities have started to organise new offices and to recruit staff dedicated to validation of prior learning. Combined with the previous decree (1985), the law on RPL has contributed to the development of an important work on skills and competencies.

In line with the process of professionalization of higher education, a new professional diploma at Level 6 (EQF) called “Licence professionnelle” dedicated to direct access to employment was created in 1999. It is a one-year program proposed by the universities. It was a success story at the beginning, and in 2015-16 there were 52,000 students, mainly in apprenticeships or “Professional Contracts”. This number is more or less the same for the last 5 years, and now some sectors say that they would prefer specific professional licences organised directly in three years and called “Bachelors”. This starts a new discussion among stakeholders about the process of professionalization.

The year 2002 was very rich in important events for both of the worlds which we discuss, and really started a new step in the convergence. It could be considered a key milestone in the timeline. A decree implements the Bologna process in French universities, organising studies in cycles L, M and D, and adopting credits, diploma supplements, quality assurance, etc.

At the same time, a law called “Of Social Modernisation”, supported by all the ministries, created two important provisions: a national registry of professional certification (RNCP for Répertoire National des Certifications Professionnelles) and a new full validation process for RPL called VAE (Validation des Acquis de l'Expérience). The national registry of professional certification is under the control of a national commission, composed of representatives of social partners and the state. Its role is to accept or register new certification options from all the different sectors. A great point for universities is that all the national diplomas delivered are registered as professional certification “automatically”. Validation of experience can be used for exemption from the whole or components of a qualification (certification) based on the knowledge and skills acquired through prior experience and learning in a variety of contexts. VAE can be organised for any qualification officially recognised by the State and the social partners and listed in the national registry.

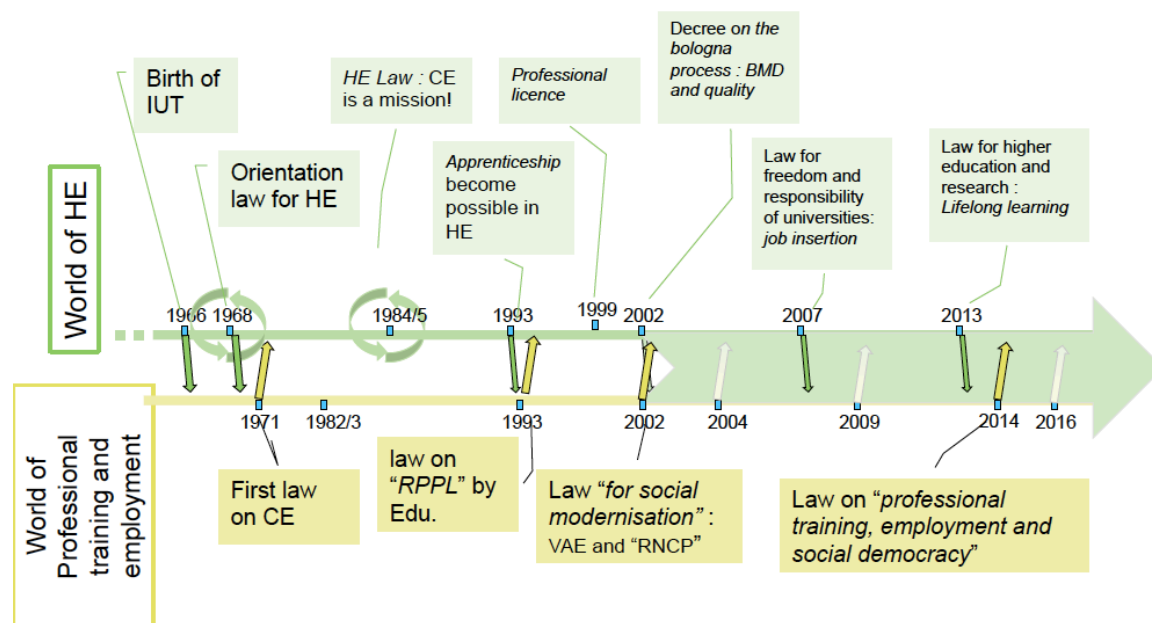
By this law, diplomas delivered by universities were officially recognised as professional certification, but to complete this recognition, they have to describe each of these qualifications in terms of outcomes, skills and competencies. This work has been far easier for those who had already invested in RPL.

The new government elected in 2007 passed a law in that year creating the obligation for the universities to guide students (including adults) in their study pathway. It is not really a new job for universities, but the services dedicated to this activity have been obliged to develop new kinds of networks at local, regional and national level with all stakeholders to improve their own competencies.

The question of graduate placement and employability is more technical, but matches with the “professional” character of the French universities since 1984. Since this law came into effect, the universities have to publish (via any media) the situation of the alumni 16 months and 30 months after graduation: job situation, sector, average salary, etc. Guidance and graduate placement is now the third mission of Higher Education.

After the national elections in 2012, two new laws, one for each domain, were passed in 2013. The first one concerns higher education and transforms the first mission of HE into: “Lifelong initial and continuing education”. A difficult discussion took place but it was impossible to agree on a simple expression like “Lifelong learning”! Many other improvements of the connections between HE and the economy have been introduced in the regulations:

- The obligation to organise “Improvement councils” for each diploma (with professionals from the relevant field involved) to discuss programme content, outcomes, needs of the sector, etc.
- A focus on skills and competences for all programmes (publication)
- The promotion of entrepreneurship
- The development of apprenticeship
- The improvement of public visibility and recognition: reducing the number of titles for each level (Licences, Professional Licences and Masters)
- Etc



The second law was called “Professional Training, Employment and Social Democracy” and was passed in March 2014. It contains several points concerning HE:

- Higher Education is a new stakeholder invited to National and Regional Councils for Professional Training (CNEFOP and CREFOP)
- Creation of a new “Personal Training Account” for all citizens (CPF)
- Creation of a registry of all the professional certification that can be chosen in the CPF framework and financed through it.

It’s the beginning of a new area and it could be developed in a possible updated version of this paper.

CONCLUSIONS

We have passed quickly over fifty years of evolution ... what a long and arduous process for those who think that the convergence between Higher Education and the “world of work” is important. The main reason pushing this evolution is that universities welcome a large part of the population during their life, and they have to be prepared for employment, obviously. But we have also to take into account the quality and level of HE personnel (professors, lecturers, etc.) and their links with up to date research (inherent to HE) so that they can bring a real added value to their courses. The economy and specifically companies have much to gain from this situation (Filloque, 2010).

University Continuing Education has made a major contribution to this convergence, mainly because it has always emphasised the social responsibility of HEIs and not just the business, resources and potential income generated by the French training market (€9 billion each year), even if this has enabled centres to be self-financing.

Considering the objectives of new programmes developed under the logic of the new regulations which are more “skill oriented”; considering the “professional insertion of graduates” (graduate placement in employment) used as a performance indicator for all HEIs; considering the market share of continuing education and the development of work based learning for licence and master degrees, etc., it is justifiable to assert that universities are able to train “skilled graduates” for the world of work but also for society.

The other question today could be: “are universities VET providers?”. We can discuss the answer weighing our socio-economic objectives and constraints against the necessity of maintaining academic freedom and independence and thus fostering creativity, innovation and ethics, but it’s clear that HEIs in France have been HVET providers since 1966 and the emergence of the IUTs.

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TOWARDS A SHARED VISION ON LIFELONG LEARNING AND CONTINUING EDUCATION AT KU LEUVEN

Herman BAERT, Anneleen COSEMANS, Lut MOORTHAMER
KU Leuven, Belgium

ABSTRACT

KU Leuven has a long tradition in offering continuing education. All faculties are responsible for developing and organising their own continuing education programmes, and each has its own policy and identity.

Although the autonomy of the faculties is important for the organisation of societally relevant university lifelong learning programmes, an overall institutional approach, recognising lifelong learning as a mission of the university, is crucial to give the necessary impetus to the implementation of lifelong learning and continuing education programmes on a faculty level.

At the central level of the university, there is a unit for lifelong learning. Although the unit has the words 'lifelong learning' in its name, the focus predominantly lies on supporting faculties in organising professional continuing education programmes. Consequently, there is a risk that lifelong learning will be narrowed down to 'the learning that takes place after having finished university'. To keep up with the challenges of the 21st century, a broader scope and strategy is needed.

To answer this need, KU Leuven invested in articulating a university-wide vision, rather than formulating regulations regarding the organisation of lifelong learning in faculties.

This paper describes the process of creating such a broad, common vision, combining bottom-up and top-down strategies, and the core elements that were its outcome.

KU LEUVEN: SOME FACTS AND FIGURES

KU Leuven is a comprehensive and research-intensive university in Belgium, founded in 1425. The university counts 57,631 students (2015-2016) and 13,133 staff members (i.e. administrative and technical staff, junior & senior academic staff, teaching staff, other academic staff) (February 2016).

KU Leuven has 15 faculties, organised in three groups of major science domains:

- Humanities and Social Sciences Group (7 faculties)
- Science, Engineering and Technology Group (5 faculties)
- Biomedical Sciences Group (3 faculties)

Within or besides the faculties operate numerous research departments and research groups.

In 2013, the whole higher education system in Flanders underwent a large-scale reform. The result was that the academic study programmes of the university colleges were integrated into the universities.

Since then, KU Leuven study programmes are available in 11 locations (campuses) spread over Flanders.

This reform also resulted in the integration of (part of) the continuing education programmes of the university colleges. These programmes predominantly focus on professional, career and skills development for specific professions.

LIFELONG LEARNING AND CONTINUING EDUCATION AT KU LEUVEN: STATE OF AFFAIRS IN 2014

At government level, there is only very limited legislation regarding continuing education and lifelong learning in Flanders. Continuing education is seen as an integral part of university education. However, this mission is not further elaborated and there is a lack of financial support, in contrast to specific funding mechanisms for (initial) education and research, two other university missions.

Nevertheless, KU Leuven looks back on a long tradition in offering continuing education. All faculties, research departments or units are responsible for developing and organising their own continuing education programmes, and each has its own policy and identity. In addition, there is, at the central level of the university, a unit for lifelong learning, which has been given the task of informing, advising and supporting the different continuing education organisers within the university. Although the unit has the words 'lifelong learning' in its name, the focus predominantly lies on supporting faculties in organising professional continuing education programmes. Consequently, there is a risk that lifelong learning will be narrowed down to 'the learning that takes place after having finished university'. To keep up with the challenges of the 21st century, a broader scope and strategy is needed.

It was only in 2014 that a first comprehensive policy paper was written and approved by the management of the university, describing the current state of affairs in continuing education in the university, and the organisational structures which existed after the integration process with the various university colleges throughout Flanders had been completed. At the same time, a new vision and policy plan on education and students was introduced for the period 2014-2017. One of the objectives of the policy plan was the development of an up-to-date and university-wide vision on lifelong learning at KU Leuven.

TOWARDS A SHARED VISION: THE PROCESS

The process of developing and articulating a shared vision regarding lifelong learning and continuing education was undertaken in the period 2015-2017.

The ambition was:

- to develop a university-wide, broad vision, in the sense that it defines lifelong learning as a learning process from the cradle to the grave and as a lifewide and essential dimension of teaching and learning at the university;
- to direct the university's mission and policy in the long term;
- to develop a framework that motivates, inspires and orients the different actors to optimise existing practices, to develop innovative initiatives and to enhance the quality and impact of lifelong learning initiatives;
- to provide a framework to faculties and departments to articulate their own policies.

In order to develop this vision, the central lifelong learning unit undertook a series of interviews with key stakeholders in faculties, departments and study programmes, to be able to visualise good practices, identify underlying principles which are worth sharing and to make an inventory of (potential) obstacles for successful implementation.

In a second step, the Education Council, the central university body which provides advice to the Academic Council on matters relating to teaching and learning, set up an advisory group which could take the necessary time and freedom to elaborate a common vision on lifelong learning and continuing education.

The advisory group was chaired by an emeritus professor and expert in (university) lifelong learning, and included representatives of all sections of the university: students, lecturers, educational developers, vice deans of faculties, organisers of continuing education programmes and the central educational support units. All members could speak in their own name.

Alongside the meetings of the advisory group, a series of interviews were conducted with important external partners from different sectors of the labour market and of society. These interviews focused on identifying the main challenges and questions within society and within the labour market nowadays, and on the role the university can play as one of many continuing education providers.

Throughout its activities, the advisory group and its chair opted for a bottom-up approach and built on already existing local and specific policy plans and documents of both the faculties and the lifelong learning unit. The advisory group's intention was to reveal the underlying principles and ideas of existing practices, and work towards the valorisation of good practices and policies, and to place these principles, ideas and practices in the broader international context of lifelong learning.

TOWARDS A SHARED VISION: THE OUTCOMES

The development process of a shared vision on lifelong learning and continuing education resulted not in one, but in two vision texts. This was a deliberate choice due to the terminological confusion between the two concepts in Flanders and internationally. Creating two separate vision texts offered the opportunity to distinguish lifelong learning from continuing education, and also to formulate their missions in a complementary way:

- 1. Lifelong Learning at KU Leuven**

This vision text looks at lifelong learning from the learner's perspective and defines lifelong learning as a broader concept with a focus on the learner and his/her learning process

- 2. University Continuing Education at KU Leuven as a lifelong learning university**

This vision text looks at lifelong learning from the provider's perspective: university continuing education as a post-initial part of the educational offering, aimed at specific target groups.

Lifelong Learning at KU Leuven

The first vision text looks at lifelong learning from the learner's perspective. This leads to the following definition:

Lifelong learning is a complex process in which people and organisations/teams, in all contexts of their functioning, form respectively a personal or organisational identity. During this process, they continue to acquire the necessary knowledge, skills, attitudes, competences and qualifications to handle their evolving professional, economic, social and cultural roles and tasks in a fast evolving society in order to take a critical, judicious, responsible and sustainable position. They do this alongside others to promote a viable and prosperous society with opportunities for everyone.

From this perspective, lifelong learning has to be part of the university's learning environment and becomes a leading principle in the educational design of all study programmes.

It is a process that is already initiated in the Bachelors and Masters programmes as *“the promotion of a ‘want-to-learn’ attitude and the competences to be able to learn”* (Van Petegem, 2011).

Integrating the concept of lifelong learning in university education serves several goals:

- **employability and citizenship:** university education does not only prepare students for jobs and the labour market, but also stimulates them to take a certain responsibility in society and to develop social and cultural roles and tasks;
- **the joy of learning:** lifelong learning is also about learning how to learn and enjoying learning;
- **community building:** lifelong learning offers the opportunity to create a valuable reciprocity between the university and the societal domains in which its students and alumni operate. Lifelong learning enables the university to create networks, to stimulate dialogue, to exchange ideas and information. It enables the university to participate in the public debate and to play a role in actual societal questions.

In order to reach these goals, it will be necessary to create a stimulating learning environment for a diverse group of learners, by building a lifelong learning attitude (21st century skills) throughout the curriculum through course sequencing and the development of flexible and transparent learning paths (online and blended).

University Continuing Education at KU Leuven as lifelong learning university

Complementary to the first vision text that focuses on the learner's perspective and the learning environment, the second vision text zooms in on university continuing education as a specific form of education provision, focusing on adult learners and realising a specific part of the lifelong learning goals.

University continuing education includes all initiatives aiming at updating, broadening or specialising knowledge, skills and/or competences. It is regarded as an essential and substantial component of the university's educational portfolio, situated at the crossroads of education, research and service to society. It consists of a variety of long term study programmes and short term activities. Continuing education design principles focus on connecting learning needs with research findings (academic orientation), investing in sectoral and professional networks and developing interdisciplinary courses and programmes.

KU Leuven has chosen a decentralised model for organising its continuing education programmes. Faculties, departments and units develop their own policy and strategy, and decide on the kind of organisational model they want to adopt. As mentioned above, a central unit supports the faculties in their activities.

UNIVERSITY LIFELONG LEARNING AND ITS RELATION TO SOCIETY AND THE LABOUR MARKET

In the two vision texts, there is a reciprocal relationship between lifelong learning on the one hand and society and the labour market on the other.

The first vision text focuses on the importance of lifelong learning in preparing students for a future evolving, flexible career, and on employability, community building and citizenship.

The second vision text focuses on the university's offer of continuing education programmes and the way it enables the university's faculties and research departments to build and maintain networks between researchers, labour market and alumni. To detect evolving learning needs, a number of faculties and research departments use specific consultation structures with representatives of different occupational fields. It is clear that in the future the networks of the research departments can be explored further with a view to developing continuing education. The same applies to the internal collaboration between faculties and departments.

Alongside the meetings of the advisory group, fourteen interviews were conducted with stakeholders from the labour market and society in general. In these interviews, the different stakeholders expressed their expectations and needs towards university lifelong learning and continuing education:

- They stressed the added value of academic continuing education and lifelong learning;
- They expressed the need for more interaction and communication: the way the university and the labour market currently communicate with each other does not fit the needs;
- They asked to further highlight and publicise the continuing education provision: the university is still heavily weighted to cater to traditional students who enter university directly after school to study full-time, and the institution's offer of continuing education courses/programmes is hardly known;
- They emphasized the role university continuing education plays in stimulating critical thinking amongst professionals;
- They saw a specific role for university continuing education in disseminating research findings and translating them to the labour market and societal needs. In this way, research findings can be linked to important societal questions.

THE FUTURE ...

After the development of this institutional response towards lifelong learning in the form of two vision texts – on lifelong learning and continuing education – the next step is the implementation of this vision into concrete university policy plans.

It is therefore promising that the recently elected Rector explicitly mentions lifelong learning and continuing education as a policy priority in his election programme. With both vision texts, the new Rector and his team will already have two elaborate documents at their disposal that can form a solid basis for a new university policy plan and strategy.

FINAL NOTE FROM THE AUTHORS

If you would like to keep up to date on the further implementation of the lifelong learning vision at KU Leuven, please don't hesitate to contact Lut Moorthamer <lut.moorthamer@kuleuven.be> and/or Anneleen Cosemans <anneleen.cosemans@kuleuven.be>.

Let us further discuss, exchange experiences and learn from each other, and in this way put university lifelong learning and continuing education more prominently on the map.

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MOTIVATION AND SUPPORT OF EMPLOYERS CONCERNING THE IMPLEMENTATION OF PART-TIME STUDIES FOR VOCATIONALLY TRAINED IT WORKERS

Knut LINKE, Michael STÄDLER, André von ZOBELTITZ, Eva BLOCHBERGER. University of Applied Sciences Weserbergland, Germany

ABSTRACT

This paper aims to increase the understanding of the relationship between employers and employees in the IT sector in terms of professional development and Higher Education (HE). The main focus of this article is to gain an insight into how employers and employees cooperate with each other in the selection and support of vocationally trained IT workers who want to qualify themselves through University Life Long Learning (ULLL) at Higher Education Institutions (HEI). The theoretical background provides an introduction to existing research into labour market behaviour, human capital management and segmentation of the IT labour market. Firstly, the field of vocationally trained IT workers in Germany was empirically analysed through an online survey and standardised telephone interviews. Secondly, standardised telephone interviews and additional interviews with decision makers were conducted to gain deeper business insights. The full results indicate varying degrees of support of skilled workers, and that the majority of the researched companies which employ vocationally trained IT workers do not have standardised processes for HE. The article closes with a conclusion and recommendation to increase the understanding of the connection between employees and employers regarding the professional development of vocationally trained employees.

INTRODUCTION

Research project Open IT has existed since 2014. Its aim is to construct, test, and evaluate academic programmes in the field of IT studies that take into account and recognise IT workers' existing competencies in order to reduce academic workload required of part-time students.

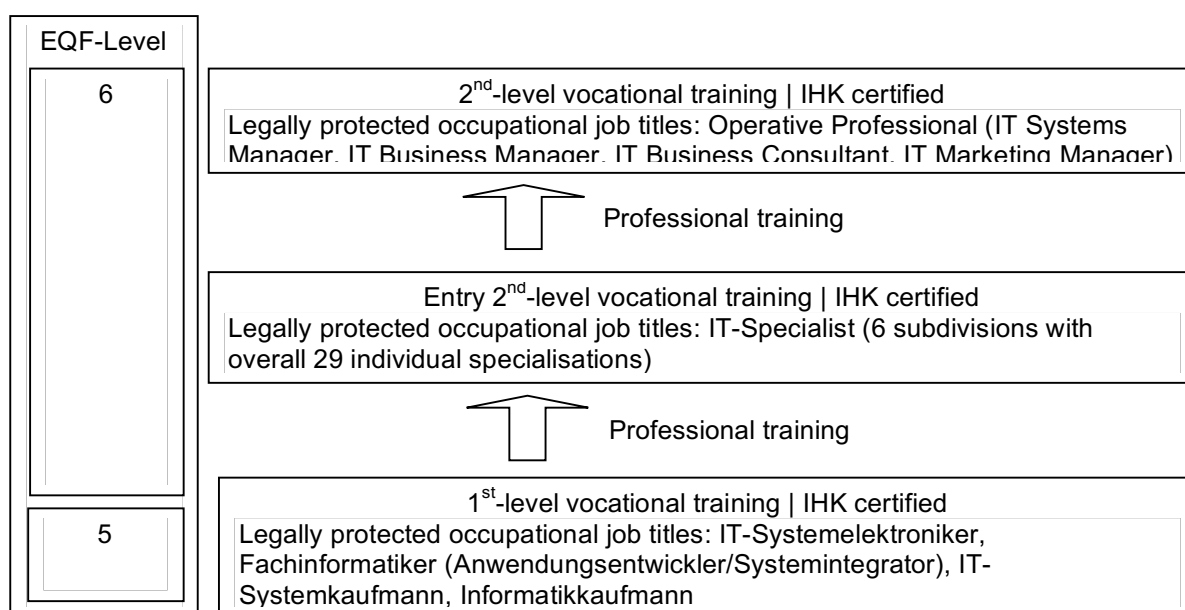


Figure 1 – Vocational training scheme for IT employees in Germany

The resulting IT studies courses are aimed at vocationally trained IT employees who have passed the 1st- or 2nd-level of the standardised vocational training as stipulated by the German Chamber of Commerce (IHK). Based on the existing standards for vocational training (EQF levels 4-6), the members of the described target groups need 91 or 120 ECTS credits (originally 180 ECTS credits) for the developed Bachelor program. It is vital that HEIs understand this kind of cooperation. Based on this insight, HEIs can develop a successful cooperation with employees and employers and furthermore, identify current threats to education. The results of the research work should offer best practices and a structure to support future prospective students or companies in promoting professional training at HEIs.

THEORETICAL BACKGROUND

As existing research shows, personal education generally has a positive impact on wages, regardless of whether the education is general or specific (Mincer, 1974). Consequently, it makes sense for employees to educate themselves to increase their wages. Past research has proven that there is no return on investment for a company in providing training if the labour market is perfectly competitive (Becker, 1964), as specific skills may already be available in those markets. In this case, a general training would only be meaningful if the employee stays with the company for a certain amount of time. An example for this is the German apprenticeship system in which general training is supported by companies (Acemoglu & Pischke, 1998). General training may be also useful for companies which pay lower wages than other market participants. Also, skilled workers who are unwilling to change their employer are less expensive for companies compared to the costs of fluctuation (Acemoglu & Pischke, 2009).

IT workers who are selected for vocational training from the internal labour market are mostly skilled or white-collar workers with a medium income level and a high loyalty to their employer. This loyalty is shown in the duration of corporate affiliation. Medium-sized and large companies represent the majority offering these developmental approaches due to the level of work (Schmiede 1997). This definition of the internal labour market may also fit the general IT labour market.

IT work requires a high level of education due to its complexity and the need for specified skills. The continuous improvement of IT workers' skills is a consequence of the fast-developing IT technology. The IT business is characterised by a substantially lower level of unskilled workers than is found in other business sectors. In addition, the number of people on the jobs market with university degrees is increasing (Braukrowitz et al., 2000). Taking into consideration the internal labour market as part of the primary labour market has important advantages for businesses. Upskilling of employees from the internal market reduces fluctuation costs which are higher in this field of work than in the high management sector or in the field of unskilled workers. Further benefits are the avoidance of high acquisition costs and a reduction of initial training costs. In addition, these medium-skilled workers are both trained for new tasks and are able to perform their current work more efficiently (Funk et al., 2010).

Equally relevant to the issue are the further benefits of training. Upskilled employees can be assigned to different customer groups or projects, typical for temporary employment agencies. This has a positive and long-term impact on the company if the employee stays with the company (Bouncken et. al., 2012). If and how a company supports the training of employees has to be carefully evaluated regarding costs, time, the expected benefits and the risk the company takes with the training. In this context, general training courses lead to an uncertainty due to a lack of specific focus, which makes a detailed analysis difficult (Zickert, 2007).

It is generally agreed in research that there is a positive correlation between the support of the employee by the employer and the employee's participation in the training (Dustmann & Schönberg, 2012). Besides the support during training or additional education, it is important to understand how the decision to support training is made. The negotiation and standardisation of a training framework is normally organised by collective institutions like labour unions which standardise those supports and transfer them into practical usage (Armington, 1994). The development of such a framework depends on the company's philosophy and operational structure and is mostly drawn up by unions (Bail et al., 2015).

Regarding the training framework conditions for educational training, the German IT market must be divided into various company types: smaller IT companies, mostly without work councils and with a community consensus approach; medium-sized companies, which are characterised by established but still flexible processes; and larger, traditional companies, which have mostly fixed framework conditions (Braukowitz et al., 2000). Small and medium-sized companies follow a trend that may be typical for Germany. Bellmann & Gerner (2011) showed in their research that only 5% of the companies with 50 or less employees have a general training framework. That percentage increases slightly for medium-sized companies (50-199 employees), but is still below 10%. With increasing company size, the percentage of companies with a fixed training concept rises significantly. Even if such a collective framework exists, a person has to qualify or be selected for this. In smaller companies, this decision is normally taken by the CEO. With increasing company size, this responsibility is assumed by HR specialists or by department leaders (Hemmer-Schanze et al., 2012).

EMPIRICAL RESULTS

Three questions were drawn up regarding the support of IT workers. The first question addresses the general support of IT workers in training: how are IT workers supported by their companies in training and educational development?

Secondly, this paper evaluates possible barriers to professional training for IT workers: what restrictions and concerns do employers have regarding higher education?

The third question addresses how companies select employees for training: specifically, whether they use certain eligibility criteria to select employees for higher education?

These research questions were evaluated in separate research steps. Firstly, the field of vocationally trained IT workers in Germany was empirically analysed through an online survey and standardised telephone interviews. Secondly, standardised telephone interviews and additional interviews with decision makers were conducted to gain a deeper insight into management thinking. Qualitative and quantitative questions were combined to create a specific research method for each target group: the employees and the employers. The results, which influence these three questions, are shown in the following two subsections.

The Support of Vocational Trained IT Workers

An online survey addressing the target group of vocationally trained IT workers was developed. This survey was distributed via various online networks. In total, 328 vocationally trained IT workers participated in the survey. Of those participants 149 are currently employed and are planning to take part in additional HE. The following table shows how those employees were supported by their companies:

Support	No. respondents	Percentage	Cumulative Percentage
Support not finally decided yet	8	5.37%	5.37%
No support requested yet	40	26.85%	32.21%
Will not receive support from the employer	15	10.07%	42.28%
Will receive support from the employer	86	57.72%	100.00%
n=149			

Table 1 – Support scheme for IT workers

The following figures apply to the 86 people who are supported by their companies. The members of this specific group have a high amount of work experience. Over 75% of them have five or more years of work experience, which they gained mostly with the same employer. Nearly 55% of the participants are employed by small or medium-sized companies. 30% of the participants indicated that they work for a company with 2,000 or more employees. Nearly all of those participants worked for the Federal Armed Forces. Most of those soldiers have already completed or are currently undergoing 2nd-level vocational training. This kind of training is standard at the end of their period of service to qualify them for the civil labour market.

None of the 86 participants have a general focus on a degree regarding school education. All participants have degrees that allow vocational training in the field of IT.

Graduation	No. respondents	Percent	Cumulative percent
High school	39	45.35%	45.35%
Professional high school	13	15.12%	60.47%
Middle school	34	39.53%	100.00%
n=86			

Table 2 – School degrees of vocationally trained IT workers

Employers offer various ways of supporting employees. A high number of participants selected the option of paid leave, which seems to be the option offered most frequently by their employers at this point. Partial study cost coverage is also a frequently offered means of support. This is not sector-specific, however.

Means of support	No. respondents	Percent
Participation fees	48	57.14%
Audit fees	49	58.33%
Paid leave	66	78.57%
Internal coaching	21	25.00%
n=86; multiple answers possible		

Table 3 – Types of HE support offered to vocationally trained IT workers

The results show a notable finding: the majority of participants point out that they were offered (paid) leave by their company for HE studies. However, the analysis of the qualitative telephone interviews with 60 vocationally trained IT workers who have decided to start their HE study program shows that their companies' support varies in reality. Most of the participants stated that they could not reduce their working time, but that the company was more flexible with their working time and they received more financial support (e.g. travel expenses). None of the survey participants stated that they received internal coaching. 10% of the participants stated that they had not informed their employer about the planned study. Those employees were unsure of how the employer would react to such a study programme and feared that they would receive no support at all.

The Role of Companies

In the next step, 30 companies were interviewed by telephone regarding HE. Those interviews addressed the content of HE offers for vocationally trained IT workers as well as the reasons for HE and the support offered by the companies. The results show that there is no relationship between company size and support or training behaviour regarding vocational or professional training. Companies which offer vocational training may deny additional HE and, conversely, companies which currently do not provide general training within the field of IT may offer additional HE. Two main reasons for limiting additional HE were mentioned.

The first issue is the uncertainty of companies as to how their educated employees should be used after and during the HE. The education might exceed the company's requirements. In this context, some companies struggled with the expected increased wages they would have to pay for a more highly qualified employee. The second concern was the aspect of time, with uncertainty as to whether a person could fulfil the requirements of HE and of their work at the same time.

The interviews also showed that the companies do not have a standardised support for HE. Only two out of the 30 companies have long-term plans to provide HE for their vocationally trained IT workers, but this education is not set up in the form of part-time studies and is completed in the form of dual studies without a reduction in ECTS credits. Other forms of training provided by employers are not HE-related. These are mostly product- or service-oriented and are provided in direct relation to the employee's work. Most companies do not have a general qualification system. Companies which want to support future HE offer mainly financial compensation, including a bonus for successful completion of a course of study. This kind of support may reflect the issue of time: most companies state that financial support is easier to realise than offering working time reductions. Although some companies do offer temporal support, this is compensated in terms of flexibility and the use of holidays or overtime.

In addition to the telephone interviews, five IT HR managers working at small and medium-sized companies were interviewed face-to-face. The interviews focused on the companies' selection behaviour. All interview partners pointed out that past grades are unimportant and are not criteria for selection. Rather, the HEI and the employee must fulfil the requirements. The main selection criteria are the employee's compatibility with the company, his or her performance at work and recommendations.

In this context, performance was mostly defined as a combination of employee competence and motivation. This definition is similar to the explanation by North et al. (2013) who added the term "possibilities" to the description of performance. Possibilities of an employee were not mentioned in the interviews. However, one participant was uncertain about the future usage of a person who will participate in such training. From these facts one may conclude that HE is an added value for the participants. Companies are willing to support their employees without a clear target after the training in order to retain them as employees for the period of training.

Similar findings regarding recommendations were analysed. Team leaders and co-workers frequently give recommendations for a person to participate in additional training. The employees are selected individually. That is often backed by a statement by the employee's department that he/she is able to fulfil such professional training. Additional training is also a method of increasing employees' commitment to the company. Insufficient training possibilities are often a reason for changing employers. This scenario is likely especially if a person has reached a high level of competence in their current work position. It is up to the

employee to select the training they prefer and which they need to achieve their goals. The companies are only the provider of a support framework. In the end, the employee decides upon the right educational programme.

CONCLUSION

The full results show that the support companies offer for training and educational development differs both in the decision process and the final signup for HE courses. It is shown that the support of employees differs in various ways and that the majority of companies which employ vocationally trained IT workers do not have standardised processes for HE. It has been revealed that the selection process of small and medium-sized companies for HE and training are highly flexible and not based on a standardised development process. Regarding the concerns of employers, it was shown that both uncertainty about the future usage of the upskilled employee and time management are reasons against support. An additional consultation might be a solution. (Pellert 2014) highlights the need for additional educational support regarding social and monetary barriers and for lifelong guidance. In this context the fact that a vocational development plan for employees does not always exist and a practical transfer of the learned content is not always given should also be kept in mind. Consequently, offering more in-depth consultation regarding requirements of study, support and future usage may be necessary and must also be discussed. In this case, the employer should normally assume the role of a strategic partner, since the valuable IT workers are becoming rarer due to academisation and more difficult to replace due to their vocational practice during the part-time study (Barney, Wright 1998). Moreover, there is more research needed into the selection of employees for training and HE as well as the planned practical application of the content learnt during the HE studies.

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GLOBAL TRENDS IN THE CONTRIBUTION OF UNIVERSITY LIFELONG LEARNING IN SHAPING THE LABOUR MARKETS AND ITS APPLICABILITY TO EU - AN IACEE PERSPECTIVE

Soma CHAKRABARTI, University of Delaware, USA

Kim SCALZO, The State University of New York, USA

Ragna Ann BERGE, Norwegian University of Science and Technology, Norway

Errol la GRANGE, CPDlive Pty Ltd, Australia

Yakut GAZI, Georgia Institute of Technology, USA

Ricardo GUTIERREZ-MERCADO, Tecnológico de Monterrey, Mexico

ABSTRACT

The International Association for Continuing Engineering Education (IACEE) supports and enhances lifelong learning in engineering around the globe. Located worldwide, the academic and professional members of IACEE often engage in creating professional higher education programmes that provide relevant content in an appropriate mode of delivery to advance the knowledge of engineers and scientists, thus providing professional development to upskill them. For the past 28 years, IACEE member institutions have been platforms for innovation in continuing education with respect to programmes that proactively shape the labour market regionally and globally. In this article, six IACEE Council members from institutions located in four countries reflect upon their experiences in their organisations and critically analyse the trends in Australia, Mexico, Norway and the United States of America, and discuss the applicability of the global trends to the continuing higher education landscape in the European Union.

INTRODUCTION

Very often, academic institutions fail to understand and thus respond to the needs of the region's or the nation's workforce. With the mission of delivering education that transforms people's lives, continuing education units can now leverage the technology platforms to reach global citizens, create unique and relevant training to address the learning needs of international audience with various cultural backgrounds and form partnerships with other universities and organisations around the world to deliver such training. The audience has changed, too. Many of our learners are completely dependent on (or addicted to) mobile devices and their attention spans are very limited. We now have this incredible opportunity to create innovative learning modules for these learners. Today's continuing and professional education landscape provides much challenge but also offers a plethora of opportunities to innovate, and only through that innovation will we be able to sustain ourselves.

By systematically analysing the needs from both the employee's and employer's viewpoints, citing effective partnerships between industry and ULLs, and discussing the innovations in technology enhanced training in the continuous professional development of working professionals, the universities contribute in shaping the labour markets in various regions. The following descriptions of such activities from six institutions in four countries reflect upon such thoughts.

COUNTRY 1: AUSTRALIA

Australia recognises that the world of 2025 will have over one billion students actively seeking education and skills (Australian Government, 2016). Learning will increasingly be

borderless. Future students will need to have a broad range of education; individuals will seek learning through on-the-job skills development, and through professional and executive education. The three strategic pillars in achieving such goals framed by the Australian Government are: strengthening the fundamentals, making transformative partnerships and competing globally (Universities Australia, 2016). In preparing tomorrow's workforce today, the roadmap puts emphasis on the culture of success that is characterized by collaboration, innovation, anticipation and reciprocity. CPDlive Pty Ltd (CPDlive, 2017) has put all four characteristics at its core in educating the Australian labour market through its Cahoot platform that embodies collaborative learning by providing human learning experience in a digital world. Through partnership with Stanford University in delivering entrepreneurship and innovation programmes for the Australian and New Zealand workforce, and through regional and other global partnerships, it offers flexible, accessible, collaborative and innovative lifelong learning opportunities for accountants and other professionals in an affordable way.

COUNTRY 2: MEXICO

Lifelong Learning or Continuous Education at the Tecnológico de Monterrey (ITESM, 2017) embodies personal development and realisation through holistic learning, which in turn contributes to society through the development of the workforce. Thus, all lifelong learning programmes are designed with three value proposals: (1) Emotional or affective: Encouraging a lifelong learning mentality during his/her professional life and afterwards; (2) Functional: Supporting his/her professional and personal development by using different formats, technologies and models; and (3) Tactical: Developing new knowledges, skills and competencies.

With a predicted 15-16% increase in adult population in 2025, Tec de Monterrey has dedicated itself to using the above value proposal for developing working professionals, especially in executive education and advanced engineering training. In doing so, it focuses on pedagogical innovation through use of educational technology, assessment of learning needs and upskilling individuals through personalised realisation of learning. It substantially differs from the concepts that many other countries have, but this holistic methodology is in alignment with ITESM's mission of providing education that transforms lives.

COUNTRY 3: NORWAY

Located in Trondheim, the Centre for Continuing Education at Norwegian University of Science and Technology or NTNU (NTNU, 2017) offers programmes for continuing education and professional development. These courses and programmes, which cover a vast array of subjects, meet the demand of professionals in need of new and updated competencies as well as those of companies looking to be in the forefront of innovation and technological breakthroughs.

Continuing education at NTNU is often driven by the faculty at the University and largely focuses on large Government-driven CE to enhance basic skills of teachers, and management and technology courses and programmes. As identified by the World Economic Forum (World Economic Forum, 2017), NTNU is committed to

1. Reskilling and development of generic competences;
2. Collaboration among government, educators and industry;
3. Providing education for employability; and
4. Career employability.

The questions that are critical for programme innovation at NTNU are

1. What are the general new skills needed in the workforce?
2. How do we better cooperate with industry?
3. How do we work to get more demand-driven development inside the university?
4. How can we shorten the development time, that is, time-to-market?

COUNTRY 4: UNITED STATES OF AMERICA

There are four major issues facing continuing and professional education in the United States:

1. Changing demographics: In a few years baby boomers will be completely retired, leaving a void in knowledge, and the millennials and Generation X will be in the workforce. How do we prepare these two groups for high level leadership and subject specific knowledge attainment?
2. Learning economy: Previously, engineers changed jobs two to three times in their careers, and mostly did the same type of work that required the same type of skillset. The world has changed. An average engineer may change career path even as many as 20 times and each time that person will need to learn new skills for jobs which never existed before. How do we train these people quickly so that they perform the jobs well?
3. Globalization: The current jobs are distributed everywhere in the world; people connect in many possible ways via technology. So, how do we train these people all at the same time, considering the fact that the learners are from different cultures?
4. Affordability: How will we give people access to education at an affordable cost while we remain financially sustainable at the same time?

Georgia Institute of Technology

Professional Education at the Georgia Institute of Technology (Georgia Tech Professional Education, 2017) primarily focuses on advanced STEM (Science, Technology, Engineering and Mathematics) education of working professionals in Atlanta, in the state of Georgia and worldwide. Until the Massive Open Online Courses (MOOCs) emerged as a vehicle for mass continuing education at almost no (or, in some cases, little) cost and challenged the status quo, continuing and professional education units had never faced such disruptive pedagogical innovation that threatened a standard fee-based face-to-face or online education.

In January 2014, by teaming up with Udacity and AT&T, Georgia Tech Professional Education launched the first accredited Master of Science in Computer Science that students can earn exclusively through the "massive online" format and for a fraction of the cost of traditional, residential programmes, and stunned the academic and business world. This affordable and accessible education from a top tier accredited institution gave an incredible opportunity to a number of working professionals to further their career. Through online and face-to-face programs, this institution touches the lives of 24,000 learners a year to advance their career through academic and professional programs. This institution has focused on affordability of the programmes and accessibility of learning resources. Its newest MicroMasters[®] with edX and several MOOCs with Coursera, Udacity and edX are other examples of such innovative approaches in shaping the lives of the lifelong learners.

The State University of New York

The State University of New York (Open SUNY, 2017) is comprised of 64 universities and colleges located throughout the state of New York. The mission of the of SUNY system is to provide highest quality, accessible educational services that are fully representative of all segments of the population in the state. In doing so, it provides a complete range of academic, professional and vocational postsecondary programmes.

In support of these endeavours, Open SUNY is a SUNY-wide collaboration that provides online-enabled learning opportunities in a flexible, seamless way so that students from any of the 64 campuses can access any Open SUNY course wherever and whenever they want. In this way, Open SUNY supports working professionals to complete their degrees and prepare them for the workforce or the labour market. Flexibility, simplicity and accessibility are key to these programmes that are taught by faculty who are provided with tools for learner-centric teaching. Also, Open SUNY Affordable Learning Solutions provides faculty with an easy way to locate and utilise free and open educational materials to provide students with high-quality free or low-cost textbooks and other learning resources. Thousands of deserving, under-represented student population have benefited from this flexibility and accessibility at an affordable cost, and the University has contributed substantially to the economic development of the state of New York.

University of Delaware

Located in the northeast corner of the state of Delaware, the University of Delaware (University of Delaware, 2017) concentrates on traditional face-to-face learning experiences with mentoring and personalised attention, and also provides graduate online programmes for professionals. Most of its students come from the neighbouring states and also work there after graduation. Through face-to-face mentoring with supporting technology-enhanced learning experiences, UD's objective is to prepare learners for the workforce, in full awareness that they will not only remain in the state of Delaware or in the neighbouring states, but also travel to work in other part of the world. It has stressed time-tested personalised, learner-centric face-to-face coaching, and introduced DC6 – the six Diversity Competencies that prepare the learners for a culturally diverse, global world. To upskill the regional workforce, it has introduced semester-based concentration on non-credit programmes that are applicable to the regional economic development. The lifelong learning units at the above three universities have taken different routes to contribute to economic and labour market development. Addressing the four major issues existent in the continuing higher education arena, as stated earlier, these universities are shaping the regional and global workforce.

CONCLUSION

While ULLL units are different in different countries and their approaches in shaping the labour markets are different, there are some similarities. There is a core belief that the programmes have to be affordable and accessible, learner centric, collaborative, globally acceptable but locally applicable so that regional workforce demand is met. Since the regional labour markets are different, a programme that is successful in one region may not be useful in another region. All programmes may not have global applicability. Even what is applicable in northern Europe such as in Norway, Sweden, Finland or Denmark may not be sustainable or even useful in other parts of Western Europe such as Portugal or Spain or Eastern Europe. Atlanta and Philadelphia – the two metropolitan areas are different in industry concentration. Hence ULLLS have to respond to that area's needs to shape the labour market for economic development.

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FROM EARTH TO HEAVEN: FORMATS TO ALLOW ADULT LEARNERS TO COMBINE WORKING, LIVING AND LEARNING

Katriina SCHREY-NIEMENMAA, Metropolia University of Applied Sciences, Finland

Bente NØRGAARD, Aalborg University, Denmark,

Ellen SJOER, Delft University of Technology, The Netherlands

INTRODUCTION

In a world of increasing complexity and rapid technological development, the interplay between Europe's goals of economic growth and social well-being, on the one hand, and academic expertise, on the other, is essential. It is an area where continuing education, innovation and research should come together to address the global challenges of our time. Adult learners, such as engineers working at companies or governmental agencies, have already gained a wealth of practical experience that can be built upon and used as a foundation to learn more to contribute to the innovation capacity of the organisation at which they work. A relevant educational programme at a university is an opportunity for further development and a way to gain important new insights. For the university, the flow of academic expertise gained from research is accelerated into practical application. With these continuing educational programmes they are satisfying their knowledge valorisation goals and are ensuring access to resources and real-life cases. The main benefits for companies are a head start on fellow companies, motivated and sustainable deployable employees (World Economic Forum, 2017) and a structural link with a research community.

Has this compelling proposition been realized in some of Europe's continuing educational programs? Or is it easier said than done? What role can the European University Continuing Education network (**eucen**) play? In this paper we look into three case studies from different universities from different countries in Europe that took up the challenge to develop innovative formats that allow adult learners to combine working, living and learning for the benefit of themselves, the company and the university.

In Finland the Universities of Applied Sciences have implemented Masters of Engineering programmes that require at least 3 years work experience after the B.Eng. graduation, and close cooperation with the workplace of the participant. As the Masters degree is based on the B.Eng. of 240 ECTS it is only 60 ECTS, which is the equivalent of one-year full time study. However, the studies usually take from 1½ years to 2 years as the students typically work full time in the company. The thesis work, which focuses on a subject relevant to the company / employer, covers half of the study - and thus the studies are closely tied to the needs of the company.

In addition to the thesis work, the courses cover deeper and wider knowledge from the area of the discipline of engineering. This updates the student's professional knowledge and skillset, and gives him / her an understanding of the latest research in the area. This is a great way of technology transfer.

In Denmark, Aalborg University offers a wide range of part-time Masters programmes for employed adults within a broad spectrum of academic fields. In 2016 a total of 2,225 fee-paying students were enrolled in part-time programmes among which more than 60% were social science students and only 10% were engineering students (Aalborg University, 2017a). The part-time Masters is not to be mistaken for the traditional Master of Science (MSc.) programmes, which according to Bologna is a 2 years study following a bachelor

degree. The part-time Masters programmes are specially prepared to meet the need of employees who lack competence development within a specific identified area. Admission to and extent of a part-time Masters programme is the same as mentioned above in the Finnish context: a Bachelors degree and at least two years of relevant professional experience, and the extent is 60 ECTS. The part-time Masters are aligned with Aalborg Universities' pedagogical approach centred around problem-based learning (PBL) (Barge, 2010) which means that more than half of the study-time (30 ECTS) is dedicated to solving real-life problems. These problems are often identified within the adult learners' workplace, which brings synergy to the learning environment.

In the Netherlands, TU Delft offer professionals already working in industry or governmental organisations ('contract PhD's') the opportunity to defend their PhD. These professionals who want to make a difference in their daily practice on the basis of scientific research remain stationed elsewhere. Their employers granted them part-time leave to follow a PhD program. The graduate school of TU Delft has an extended doctoral education (DE) programme. The DE Skills Training Programme offers a range of courses and activities for acquiring transferable skills, to increase disciplinary competences, develop a deeper understanding of ethics and professional integrity, and obtain research skills: activities to reach full proficiency in conducting research. Each category within the programme requires a minimum of 15 GS credits which amount to a total of 45 GS credits (1 GS credit is equal to 8 hours). PhD candidates who have completed doctoral level course work prior to starting their PhD at TU Delft are eligible for requesting an exemption (T U Delft, 2017). This case is about setting up a PhD track as a multi-year collaboration between the PhD candidate, the employer of the PhD candidate and the university. A PhD project in this context therefore entails not only the training of an individual to become a scientific researcher, but also a collaborative project in which new knowledge is developed that should lead to innovation.

The overall question is: which characteristics in the design of the programme ensure that adult learners' needs are addressed, and that they are able to combine work, life and education in the service of themselves, the employer and the university?

Case studies are considered to be useful in research as they enable researchers to examine data from real life situations, and they allow the exploration and understanding of complex issues. It is used here to describe several innovative designs and to examine the difference between the realized and the designed curriculum. Within this context, better insights are provided which will contribute to the needs of adult learners. Further, through the three cases we will show that a 'one size fits all' approach is not realistic because of the contextual differences. If we want to consider the role of **euцен** and the topics that are of importance, the (categories of) promoting and impeding factors of this research can serve as input to start the discussion at the conference.

CASE STUDY: FINLAND

The Masters courses in Engineering at the Universities of Applied Sciences in Finland are planned to directly meet the needs of working life. That means the content of the studies is applied and thus is directly relevant to and useful for daily work. However, methodological studies are also included to give the students competences to execute research; and, what is in these cases even more important, the ability to critically assess and validate research which has been done elsewhere.

In the structure of the studies the daily work schedule in a company is taken into account: lectures are mostly on two evenings of the week or intensive periods partly during the weekends. Distance education is adapted and individual assignments are used. All this helps to tailor the learning for the needs of the student and his/her employer. As an example of these courses, Figure 1 below shows the structure of an IT MEng course from Metropolia University of Applied Sciences. The purpose of this programme is to deepen the students' technical knowledge and additionally to provide them with some research and management skills.

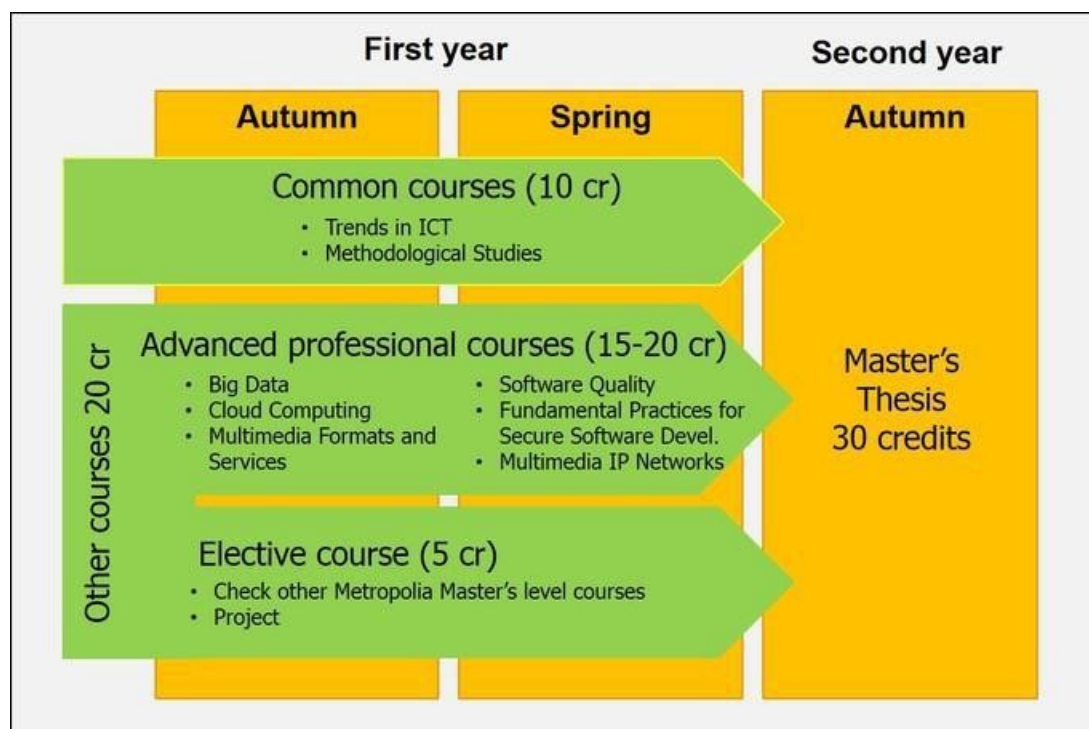


Figure 1. An example from the professional MEng course in IT (Metropolia University, 2017)

In the Masters programmes in Metropolia very much emphasis is placed on close contact with the employer. Each of the students has four coaches from the university, in addition to the coach from the company. The programme leader and coordinator regularly follow up the progress of the students. The 1st thesis coach visits the company and makes sure that the task is understood by all parties in the same way. The role of the company coach is to define the needs of the company, and based on these needs, research questions are framed jointly by the company, student and thesis coach. Furthermore the 2nd thesis coach validates the evaluation and supports the 1st coach.

This close contact between the company and university creates many additional benefits to all the parties. Teachers learn to know the companies, their products, processes and strategies, and at the same time effective technology transfer from the university reaches the company. Furthermore, these activities strengthen the base for future cooperation - the colleagues of the student might apply for the next programme, or some innovation projects for the students in Bachelors programmes might be established. Even larger development projects have been initiated through these connections.

The students of the Masters programme create a close group while they are studying. They are cross-sparring each other's work and thus supporting each other. This is an effective way to build professional networks, which will then continue after the graduation as alumni activities.

The studies are adopting the CDIO-approach (Conceive - Design - Implement - Operate) (CDIO, 2017). This means that the students are supposed to first conceive the challenges by analysing their situation until the root causes are defined. After that, they need to design different options for solutions. Implementation of the chosen solution will be followed by study of the added value of the change or new product. Furthermore, in operational phase the solution should be analysed and evaluated until the cycle begins again. In this way the whole lifecycle of the executed work is included.

CASE STUDY: DENMARK

Part-time Masters in Information and Communication Technologies (mICT)

The mICT is an international part-time Masters programme at Aalborg University designed for employed learners who work in the ICT industry and who want to keep their job while they are participating in a Masters programme (Aalborg University, 2017b). The curriculum is carefully put together to be attractive and exciting for both the ICT engineer and the ICT business professional.

The aim of mICT is to integrate students' knowledge of technology, users and markets to educate ICT professionals with both deep and broad competencies. The courses/seminars are mainly given in the evening and during weekends.

The cross-disciplinary profile addresses the growing need for ICT professionals who can combine knowledge from different areas:

- Internet, Communication and Broadcast Technologies and Converging Media
- Services and Platforms
- Development of User-friendly Applications, Solutions and Services
- Business Development and Business Models
- Security, Trust, Privacy; Legal and Ethical Aspects
- Organisational aspects of ICT

The programme is provided in three trimesters, where a trimester in the full-time (one year) version of the education is equivalent to four months, in the part time (two years) version is equivalent to eight months and in the part time (three years) version is equivalent to one year.

The programme covers 3 main areas (Aalborg University, 2017c):

- Networks and services
- Design and users
- Market and regulation

	1ST TRIMESTER THEME: ISP: SERVICES AND PLATFORMS CIS: ENTERPRISES CYBER SECURITY MII: ORGANISATIONS AND INNOVATIONS	2ND TRIMESTER THEME: ISP: APPLICATION DEVELOPMENT CIS: PRIVACY & SECURITY FRAMEWORKS IN ORGANISATIONS MII: SERVICE DESIGN	3RD TRIMESTER THEME: MASTER'S PROJECT
Courses	10 ECTS	10 ECTS	5 ECTS
Project	10 ECTS	10 ECTS	15 ECTS
Total	20 ECTS	20 ECTS	20 ECTS

Figure 2. The Part-time Masters (mICT) (Aalborg University, 2017c)

The mICT programme is taught via extensive use of IT-supported distance education tools such as interactive courses with web-based support, platforms for group collaboration, Moodle and other support. However, at the seminars, courses are taught face-to-face, and teachers are facilitating learners' project-work. In addition, learners are encouraged to engage in dialogues with fellow participants (peer-learning).

The pedagogical approach is Problem-Based Learning (PBL), an internationally recognised method of active learning through problem solving. Key components also include

- Flexible knowledge
- Self-directed learning
- Intrinsic motivation
- Collaborative skills

More than half of the programme content is project work (35 ECTS), and the other half is made up of taught courses. The extensive amount of resources dedicated to project work allows the learners to identify, analyse in-depth and solve real-life problems which might have been identified within the workplace of the learner or in collaboration with management, or even to address problems of strategic relevance to the company. From a learning perspective, the context of the problem has to be as authentic as possible; and if the context is the learners' workplace – the criteria for relevance must have been fulfilled.

CASE STUDY: THE NETHERLANDS

TU Delft acknowledges the doctorate as a key instrument to address the increasing complexity of society. The core of the PhD programme is the PhD candidate's research project. This is supported

by a supervisory team, PhD mentor, progress meetings and the Doctoral Education programme. A full-time PhD research project usually takes 4 years. In order to stay on track each PhD candidate has several mandatory progress and evaluation meetings with his or her supervisory team. During the PhD project, candidates will not only focus on their research but also on personal and professional development. This development is mainly facilitated through Doctoral Education. In the Doctoral Education programme each PhD candidate is required to take part in courses which support the development of their knowledge in the field of their specific research, as well as courses in personal and professional development (T U Delft, 2017b).

However, although the theses of contract PhDs must meet the same requirements as the fulltime PhD candidates at TU Delft, this format for a PhD programme is not eligible for contract PhDs. The Delta Infrastructures & Mobility Initiative (DIMI) and Delft Energy Initiative (DEI) at TU Delft have launched a pilot for a collaborative PhD track within the graduate school for contract PhD candidates. This collaborative PhD track contains a preparatory phase in which the candidate discover what a PhD trajectory requires, and what the differences are between the world of practice and that of science. Furthermore, a company supervisor will be added to the guidance team, next to (usually) two supervisors from the university, one of which is the promoter and the other usually is the daily supervisor. The company supervisor will in particular support the application of the results in practice. Furthermore, time allocation, funding and intellectual property rights should be discussed before starting a PhD track. Finally, once started, the focus of contract PhDs is much more on research related skills (such as research design, how to make a questionnaire, discovering statistics, etc.) than on transferable skills for personal development (Sore and Hertogh).

CONCLUSIONS

Common to all of these programmes in three different universities is that they take the content and purpose of the learning from real working life needs combined with individual motivation. However, the pedagogical angle to the studies can be different. Furthermore, strong support and coaching both from the employer side and university side enables students to carry out the studies within the expected timeframe.

The 60 ECTS study programme organised in a timeframe of mostly 3 semesters is possible to complete due to the convergence with the students' every-day work. The aim is that the students should be able to include tasks from their work-life into the education, which can be time-saving for the student since the task also is part of his/her work. Also, this close relationship to the students' work gives birth to work related benefits, which to some students are the motivation for study.

During the studies students are encouraged to form groups to work on assignments and projects; in the long term, this can create valuable relationships and professional networks which can be very useful e.g. in regard to the learners' long-term career planning. The programme also brings the possibility for university academics and professionals in the field to establish long-term relationships, which can bridge the gap between universities and companies.

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FLEXIBLE PATHWAYS CONNECTING VET AND HE BY TAKING INTO CONSIDERATION THE DEMANDS OF THE LABOUR MARKET – THE VIEW OF EUROPEAN STAKEHOLDERS

Carme ROYO, Francesca URAS. euцен, Belgium
Hans DAALE. Chain5, Netherlands

INTRODUCTION

The following document collects and summarizes the feedback and recommendations provided by the European stakeholders consulted on the statements formulated by the TANDEM project consortium as a result of the work and analysis done by the project consortium within Work package 1 and Work package 2.

The statements were presented during the **euцен** 49th European Conference in Mainz, 07-09 June 2017, where some of the participants showed interest in the content and commented on the work presented.

To give a better account of the contributions collected, the report is structured as follows: the recommendations are provided following the order in which the 19 statements were originally proposed to the respondents, and their comments and responses follow each statement.

Statement 1

If non-formal certificates are obligatory for jobs (these refer to practical competences needed for the workplace), e.g. based on national regulations, those modules have to be integrated also in formal study programmes at the corresponding level(s) in VET and HE. This means that those affected can work directly in companies without the need to re-obtain those non-formal certificates.

Recommendations on Statement 1:

- There should be close collaboration between:
 - a) the national bodies responsible for defining the non-formal qualifications necessary for the labour market; and
 - b) the VET and HE institutions delivering formal qualifications
- This collaboration should include systems to make available and keep updated information on the skills competences and non-formal qualifications that are required for employment
- The systems for the management, control and updating of the regulated professions should be made more transparent and subject to regular review.

Statement 2

In case of international jobs foreseeing similar activities in the workplace, that include international requirements, we also need international certificates for the training programmes involved – to be recognised at international level. Those certificates can also be used as parts of international formal studies and joint degrees (offered by institutions for VET, HE and similar sectors).

Recommendations on Statement 2:

- Models of good practice already exist of:
 - a) Collaboration between multi-national companies and HEIs and higher professional schools/institutes to provide training and qualifications which can be international; and
 - b) Collaboration between HEIs in Europe and beyond (e.g. European masters, ERASMUS Mundus masters) to deliver skills, competences and qualifications which are international
- These models should be analysed for their transferability to other domains and other professional/vocational areas.
- Such analyses should lead to the encouragement (e.g. through start-up funding) of new initiatives and experimentation for further development

Statement 3

Programmes at VET Level 4 must give the opportunity to (young) students in their final year to get specific labour market-oriented certificates, in combination with their internship. This means that the content of the modules for these certificates is developed and maintained under the control of the companies in the sector. In such a situation, the government finances part of the costs for students: material, salary, insurance, travel. In this period students can work, for instance, 3 days in a company and go to school for the remaining 2 days.

Recommendations on Statement 3:

- VET programmes at Level 4 should give young people the opportunity to obtain specific labour market oriented certificates based on their internships as part of the VET qualification
- Enterprises should be given a greater role in the design and assessment of this element
- Financing of these arrangements should be shared

Statement 4

In addition to vocational and technical training needed for the workplace, the industry also expects employees to possess other competencies, such as managerial skills. Most companies are trying to develop these skills outside of their technical training. It would also be beneficial to include this type of personal development training (team work, communication, time management, team management, etc.) in regular training programs.

Recommendations on Statement 4:

- In addition to vocational and technical skills, industry needs a wide range of generic skills: team working, communications, time management, team management, etc. The development of these skills should be included in regular VET and HE programmes.
- Collaboration in regional/local networks would facilitate the inclusion of such skills differently, in ways most relevant to the intended career path of the individuals

Statement 5

If in a country formal education is under control of Ministry X and non-formal education is organised by Ministry Y, the providers of VET and HE (at levels 4, 5 and 6) need to have a national platform to discuss issues related to Lifelong Learning.

Recommendations on Statement 5:

- Often VET, HE and LLL are organised by different ministries at national level, but they should all be involved in the development and implementation of an LLL strategy
- Platforms should be developed and supported by all the ministries involved and should be made operational at different levels – national, regional, local – so that issues relevant to all can be discussed and so that actors with different interests – policy, practice, management, research - and different levels of authority can participate appropriately and effectively.

Statement 6

Business Academies, owned by big companies and responsible for internal professional training programmes, have to be integrated in the national education system, in case they offer non-formal certificates that are (partially) funded by the (regional) government. If they are part of the system, this will allow adult learners to get exemptions in case of studying in formal degree programmes offered by colleges and universities.

Recommendations on Statement 6:

- If Business Academies offer internal, professional certified training that is funded partly by regional government, then they should ensure that the training provides genuine links, bridges and recognition arrangements with the formal professional and HE programmes offered by colleges and universities.
- Close collaboration between all the stakeholders must be put in place to achieve this.

(The following three statements were considered together, and responses and recommendations are included after Statement 9.)

Statement 7

We need more research on cases where students follow courses, training programmes and even full degree programmes at Level 5 (of the National Qualifications Framework), after completing a full degree programme at Level 6 or after dropping out from a formal programme in higher education. In cases like this, Level 5 programmes have to be offered in an apprenticeship format.

Statement 8

Experiences and good practices of adult learners in formal and non-formal programmes at Level 5 (offered by institutions that are selected by companies) must be used in the future for developing new and creative arrangements, so as to have more flexible work-based learning pathways starting from Level 4. This can help to raise the status of Higher VET at Level 5, if adult learners want to get a qualification at a higher level. It can also represent a choice for youngsters for a more attractive HVET programme, parallel to studying in Higher Education.

Statement 9

Within or after this project we need to pay attention to formulating the essential issues in order to raise the status of Higher VET for all stakeholders – next to Short Cycle HE. This is necessary knowing that a lot of adult learners want to get a well-recognized qualification at a higher level, and it will make the choice for HVET more attractive for younger people also, being a qualification similar to SCHE.

Recommendations on Statements 7, 8 and 9:

- At present there are major difficulties for students moving between Levels 5 and 6. More research should be done on the needs, opportunities and barriers to such movement, and the underlying reasons
- The development of Level 5 and 6 professional routes has been very patchy and in general slow. There is resistance to vocational drift in universities and academic drift in the universities of applied sciences and the higher professional schools. More collaboration between the two types of institutions and with enterprises should be systematically developed to promote innovation and creativity in the provision of flexible pathways between the programmes of different providers
- The flexibility should be focussed on the needs of the students and of the labour market rather than fixed to the institutional structures and budget streams
- These flexible individual pathways will require new forms of accreditation and financing that can function across existing structures
- The European commission should provide frameworks of support for the creation of such experimental arrangements and for the sharing of experience between the various actors and stakeholders
- There should be much more promotion of the idea of Level 5 qualifications to providers and employers, as well as parents, young people and adults looking to upgrade their skills or convert/transfer to different career paths
- The existing Platform for LLL should make a contribution here since it involves all the key actors and stakeholders

Statement 10

We need more attention for the role of Chambers of Commerce and Industry (and similar organisations) in proving a 'linking pin' between companies looking for tailor-made training, and the education providers of VET and HE. Examples from countries like Germany (which is doing well as an economy, using a dual system in VET) and Spain (which is still facing a lot of problems in terms of the economic situation) can be used as inspiration for similar countries.

Recommendations on Statement 10:

- The European Commission should undertake an inventory of the roles, strengths, weaknesses, functions and activities of the Chambers of Commerce and similar/equivalent organisations where there are no Chambers of Commerce
- This inventory should be the basis for sharing experience at all levels and in the development of the role of these organisations in supporting and promoting greater collaboration for innovation (e.g. of the kind recommended under Statement 7 above)

Statement 11

Social partners, involved in the development of the European Qualifications Framework for Lifelong Learning (EQF for LLL) and in its European Advisory Board with representatives of all member states, need to have a formal link with an international platform for representatives of international networks (associations) responsible for international certificates (based on international qualifications).

Recommendations on Statement 11:

- An international platform should be created to promote dialogue between the national and international actors and stakeholders on the subject of possible linkages between the EQF and international certificates and qualifications
- This should lead to a structural Working Group at European level to discuss the implementation of European and national procedures that could be put in place for international certificates and certification
- The Working Group should also discuss the strengthening of links between the EQF and the EHEA, and the quality assurance procedures that underpin them in order to facilitate the inclusion of international certificates.

Statement 12

There is a need for a link between the European Standards and Guidelines for Higher Education and widely accepted standards for quality assurance in the world of work, controlled by other non-state organizations (national and international).

Recommendations on Statement 12:

- Discussions should take place especially with ENQA on the possible linkages between the ESG for the EHEA, which focusses on learning outcomes for diplomas, and the quality standards in enterprises (e.g. ISO system) which focus on the processes and procedures
- University departments for LLL and Continuing Education frequently work with both systems since they bridge the academic and professional domains. They should therefore be involved, especially through their national and European networks and associations for LLL and adult and continuing education

Statement 13

There is a need for a European Qualifications Framework for Non-Formal Qualifications (EQF-NF), with descriptors taking into account standards that are used by 'the world of work' and with a 'conversion table' to be used for this EQF-NF and the EQF for LLL.

Recommendations on Statement 13:

- More non-formal qualifications should be referenced to the EQF
- The descriptors in place for HE (the Dublin descriptors) should be used as a basis for developing descriptors for lower levels and for non-formal provision

Statement 14

Every country needs a national system which involves big companies paying a specific levy (taxes) for the funding of apprenticeships in their own organisations, but also for having a budget for small and medium-sized enterprises (SMEs) accepting apprentices. The government should be ‘the broker’ in this system, paying for some other ‘out-of-pocket’ costs for those SMEs.

Recommendations on Statement 14:

- Governments should broker a system of shared training and shared financing of training between large enterprises, SMEs and micro businesses
- A conference should be organised to kick-start this process involving all the stakeholders, including the social partners and the business / enterprise networks and associations, to facilitate and promote this debate

Statement 15

LLL Universities can take the lead in the (international) discussion about the role of Level 5 qualifications (the European Level 5 Area) in up-skilling workers with a VET background and in opening possibilities to develop a formal degree at level 6.

Recommendations to statement 15:

- **euцен** and its member universities and national networks for LLL have considerable experience in this debate. **euцен** and Chain5 should present a policy paper to BFUG for the EHEA conference in May 2018 in Paris
- Similarly, a debate should be (re)launched by CEDEFOP and the VET stakeholders and professional associations to explore links and support for the promotion of Level 5 qualifications

Statement 16

If LLL Universities are working together with Business Academies, we need to carry out research on the criteria for this cooperation and the success factors. The outcomes of the research can be discussed with social national and international partners.

Recommendations on Statement 16:

- Various organisations – UNIIN, European Business, the Business Forum – have done considerable work on the relationship between HE and the business community and there is a body of research on this topic. This should be brought into the debate and discussions about Level 5 qualifications
- Similarly, these organisations should be invited to take up the challenge of the Level 5 and 6 professional qualifications.

Statement 17

‘Academisation’ can currently be observed insofar as the statistical numbers of graduates are clearly growing in the higher education programmes. If the development continues in this direction, vocational training and the dual system of education will disappear or become insignificant. Vocational education must be a fully-fledged system, recognized as an educational phase of equal status. If the ‘final qualifications’ could be only provided by HE institutions, vocational education would be degraded.

Recommendations on Statement 17:

- With the massive increase in recent years in the participation rates in HE there is a fear that VET is being downgraded. In addition, there are skills shortages that could be addressed through VET and particularly through Level 5 qualifications. The Vocational Skills Week should be given a higher profile and, using a range of data, promotional tools and social media, the value of VET should be promoted much more effectively to young people

Statement 18

VET providers have to develop programs (VET5) and must give VET students/apprentices the right tools more precisely attuned to job market demands. Higher-level VET qualifications refer to highly skilled workers, but this does not mean necessarily that those skills can be obtained only by higher education institutes/degrees.

Recommendations on Statement 18:

- VET and professional training providers should develop more programmes at Level 5 and more career pathways through Level 5 and Level 6 training.
- They should develop work-related as well as job-specific programmes so that they offer better balance between the two and open up wider horizons for career development in a rapidly changing labour market

Statement 19

To avoid the competition between the two sectors (VET and HE), as well as duplication and wasted resources, it is necessary to redefine roles, identities and areas. For instance, it will be necessary to look at similar credit systems like ECTS and ECVET, knowing that at the moment in most countries these systems are not fully compatible, meaning that credits cannot be accumulated from VET to HE.

Recommendations on Statement 19:

- The specific roles of HE and VET institutions and providers should be clarified so that areas for collaboration and cooperation can be seen more clearly
- Local/regional partnerships and networks (see also recommendations under Statement 7) should carry out mapping exercises to see where there are actual links and pathways that may be under-exploited, and potential future ones that could be created.
- The validation of prior learning and of informal and non-formal learning should also be promoted to the full range of providers as a tool for bridging specific VET and HE programmes, not just for individuals but for groups who have a similar type of experience and qualification

CONCLUSIONS

The workshop in Mainz provided a clear picture of the dynamics that exist when it comes to the design of learning pathways connecting levels 4 and 5.

The interests of the employer focus on training and education that is important for (new) developments related to the job, while an employee also looks further into the future when it comes to his or her career.

The TANDEM project shows that there are sufficient possibilities to link these interests together. It is possible that employees and others who are involved in lifelong learning can also continue to study at higher levels, even within universities, based on work-based learning.

We must, however, ensure that the parties concerned come to the table with those targets in the back of their heads, to make plans, with a clear structure. The government of a country can be supportive in this, by considering whether adjustments are necessary within the regulations, in order to offer the education providers (formally, non-formally) more possibilities if it is about the scope in their policy and strategy.

In short, the discussions within the project and during the workshop in Mainz show that things are moving in the right direction with the upscaling of people, as all stakeholders are prepared to build the necessary bridges, from their own capabilities and responsibilities.

So, get started!

REFERENCES

Full account of the finding of TANDEM can be read at the project website
<http://www.tandem-project.com>

Beate HÖRR

*Director, Zentrums für wissenschaftliche Weiterbildung
Johannes Gutenberg Universität Mainz (DE)*

Conclusions

During the 2017 Mainz conference of the European university continuing education network, [eucen](#), we discussed the role that [eucen](#) could play as an important stakeholder of Vocational Education Training (VET) and Professional Higher Education (PHE). During the conference we heard about different European models of continuing education (CE) and VET as possible solutions to the challenges we are facing in the labour market. Germany is a suitable country to discuss this topic because of its “dual education system” – vocational education is a key element of the system.

So what are the three key messages we take home from this 49th [eucen](#) Conference? The most important perception was that the dividing lines between VET and CE/ULLL are not as sharp and clear as politicians or funding programmes presume. There is a European wide tendency to segregate education into different sectors instead of bringing things together along the “student life cycle” concept that takes into account that VET and CE/ULLL have a lot in common. If we are to take the idea of LLL seriously and adopt the perspective of the learners themselves, segregation is not useful. These matters were discussed in the following contributions:

- *From earth to heaven: Formats to allow adult learners to combine working, living and learning*
- *Professional and academic: opposite concepts? The French approach for filling the hypothetical gap*

Another finding was the difference between the definitions of VET in comparison to that of ULLL. This can be substantial depending on the education system of the countries we represent and come from. By systematically analysing the different VET concepts from both the employee’s and employer’s viewpoints, we realized that we are far away from “a unique” European VET understanding as outlined in the IACEE paper - *Global trends in the contribution of ULLL in shaping the labour markets and its applicability to EU*.

Finally, yet importantly, we found that VET and CE/ULLL effectiveness for the labour market depends on the strength of the working partnerships with industry. VET and PHE have key contributions to make in shaping and strengthening the labour market in Europe.

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Balmes 132-134
08008 Barcelona - Spain

T. +34 935 421 825

F. +34 935 422 975

www.eucen.eu

office@eucen.eu

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european university
continuing education network

www.eucen.eu