

Project: 2014-1-SEO1-KA203-000922

Project acronym: CIGN

Project full title: Creative Industries Global Network



REPORT 1A

IDENTIFICATION OF SKILLS GAPS IN CROSS-MEDIA DESIGN AND PRODUCTION IN THE CREATIVE INDUSTRIES AT EU-LEVEL

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Date of preparation: 07/03/2015 WP Reference: O1 Revision: 5	Project coordinator Tommie Nyström Linköping University	 Funded by the ERASMUS+ Programme of the European Union
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1 Introduction

Skills identification in the industry and the educational system is nothing new. Over the last decade, it gained enormous momentum in light of structural changes that rocked the economy of the European Union. This prompted the EU to be more vigilant about its competitiveness vis-à-vis other continents, and about the possible effects of developments in information and communication technologies for our knowledge society. The transition from the industrial to the digital era requires the reskilling of people in Europe. In nearly seven years, the identification, analysis and forecasting of skills needs has become a key element of policies to improve the functioning of labour markets, the competitiveness of companies and the relevance of higher education. Higher Education Institutions (HEI) need to be conscious of new skills portfolios in order to shape educational programmes and ensure that graduates are 'future proof'. Future skill requirements and the need to specify them precisely have therefore been increasingly referred to in the framework of the EU Lisbon Strategy on growth and jobs, and other related policy documents thereafter, and have been subject to many researches and surveys. This report aims to gather the most relevant findings of these reports and will pay special attention to the context of partner countries of the Creative Industries Global Network (CIGN) project.

CIGN is a pan-European network for curricular development for the Creative Industries and will identify sectorial skills gaps, develop curricula to address these, and create opportunities for future employment to evolve during and after the proposed project.

ICT-driven approaches that grant access to education for everyone, that create learning communities beyond classrooms and that allows education for cross-media design and production across borders and languages are challenges that this project aims to tackle.

All partner institutions have a proven track record of cooperation on different levels of research, education management and programme development. In addition to established student and staff mobility programmes, the four European HEIs are collaborators in the InterCultural Design Camp¹, a EU-funded Summer School.

Although all partner institutions have a strong focus in educating students for the Creative Industries, each of the higher education institutions has a slightly different focus.

The partner institutions are:

- Artevelde University College Ghent, Belgium
- Linköping University, Sweden
- Ryerson University, Canada
- Stuttgart Media University, Germany
- University of the West of Scotland, UK

In the following pages, the report describes the transformation of the skills portfolio as the media design and production sector evolved into the creative industries. The functioning of sector councils in Europe will highlight this, as a means to come to a more structural and concerted approach in

¹ <http://www.designcamp.eu>

assessing skills needs involving all of the relevant stakeholders. Special attention will be given to the latest and most relevant EU-policy and research papers related to media design and production.

A separate report will examine how the national authorities and stakeholders of the five project partners respond to this issue. It is not the aim of the report to present an exhaustive list of reports and research documents on the above issues, thus the selection will focus on the reports with the most relevance and pertinence for the overall CIGN project goals.

As this report is the result of a collaborative effort, the name of the author of the initial draft has been placed first, the names of the other partners follow alphabetically.

2 Background on the transformation of the sector

The lack of information on future skills needs and newly emerging skills has been a long-standing concern in Europe. This is true for all economic sectors but especially for the domain of information and communication technology. This should be no surprise given technological innovations and their insinuation into changing consumer preferences. The present situation in the media industry is characterized by the speed with which compelling changes are taking place in the Creative Industries due to - amongst other things - new applications, new consumer needs, new target groups, new business models, as well as aspirations and expectations. Driven by these changes, completely new industries have arisen (such as computer games and web design), and traditional consumer industries have been forced to redesign and repackage their offerings to suit consumers' desires.

The prospect for innovations requires a quick response to be effective and does not stop to impose challenges and infuse opportunities to the sector. In turn, due to their structural character, changes bear a forceful weight on the need to swiftly adapt the skills portfolio of the existing and future workforces. Companies that have not taken the time or lacked the resources to restructure, to revamp their businesses, to invest in their existing workforce or attract new skills, often did not survive the constant transformation of the sector. As a result, new functional and professional profiles are often already (long) in existence before they are formally defined by official bodies established to document and describe the skills of these new profiles.

Over the last decade, the EU authorised a number of studies to analyse the European economy and the creative industries in particular, especially its competitiveness and prospects to respond to recent structural and technological challenges in an open market context (e.g. [1], [2] and [3]). One of the major findings of these reports related to the transformation of this sector over the last two decades. Digitalisation and Information and Communications Technology (ICT) developments have completely transformed production processes and their output potential. Advances in technology, business models, communications strategies, and consumer needs have led many graphic communications companies to broaden their services to become 'one-stop-shops' for marketing, design, print and non-print media production, as well as database management services. As a result, the old denomination 'print media' is out-dated and 'cross-media design and production' is more representative of an emerging sub-sectorial focus within the Creative Industries in Europe.

The digitalisation of communication and the emergence of the Internet furthered the convergence of freestanding media (radio, television and print) that once stood alone. Recently, various economic sectors, concerned with creation or exploitation of knowledge and information, saw fit to group and adopt a new name, the 'creative industries' or 'creative and digital industries'. Also organizations,

companies and institutions active in the field of cross media design and production increasingly adopted this new appellation and approach.

Creativity is increasingly perceived as a strategic driver for economic growth and a real asset for improving competitiveness in a knowledge-based economy² [4]. The Creative Industries are knowledge and labour intensive and foster innovation, so the sector is perceived to have a huge but largely untapped potential for generation of employment and export expansion [4]. This offers both an opportunity and a challenge as the technological landscape is not remotely stable but is changing at mindboggling speed and employee skills will have to evolve along with it. This increases the pressure on an already complex society as it attempts to come to grips with the opportunities of today's technology while simultaneously addressing the need to prepare for tomorrow's technological innovations.

2.1 The emergence of the Creative Industries in Europe

This report is not about collating definitions or delineating a broadly or academically acceptable definition of the Creative Industries or the Creative Cultural Industries, but how skills identification is taking place within this new concept. Some common ground and acceptable description of this sector is required in order to better understand and contextualize today's reality of crossmedia design and production. Although not a single definition of the Creative Industries is widely accepted, all agree that it is a key component in the new knowledge economy. For the sake of this report, the authors adopted Hawkins' definition of the creative economy encompassing advertising, architecture, art, crafts, design, fashion, film, music, performing arts, publishing, R&D, software, toys and games, TV and radio, and video games [5].

Within the EU, the formal origins of the concept of Creative Industries [6] can be found in the decision in 1997 by the newly elected British Labour government to establish a Creative Industries Task Force (CITF), as a central activity of its new Department of Culture, Media and Sport (DCMS). The Creative Industries Task Force set about mapping current activity in those sectors deemed to be a part of the UK Creative Industries, measuring their contribution to Britain's overall economic performance and identifying policy measures that promoted their further development. The Creative Industries Mapping Document, produced by the UK DCMS in 1998, identified the creative industries as constituting a large and growing component of the UK economy. The UK Creative Industries Mapping Document defined the Creative Industries as *'those activities which have their origin in individual creativity, skill and talent and which have the potential for wealth and job creation through the generation and exploitation of intellectual property'* [7].

As a consequence of this delineation, the Creative Industries sector includes a variety of business, including many types of enterprises, from large-scale enterprises (LSE) and multi-national corporations, to areas of activity in which small and medium enterprises, (SME) are predominant. As is the case with media design and production companies, SMEs make up the majority of the creative industries sector as a whole. According to a recent study on the Entrepreneurial Dimension of the Cultural and Creative Industries, 80% of enterprises in the sector are SMEs with many being sole proprietorships or micro-SMEs [8]. As such, a report dealing with skills identification in cross-media design and production also reflects the profound transformation of the sector over the last two

² http://www.access-to-culture.eu/accesstoculture/14/calendar/?calendar_id=56

decades. This report identified how expertise in the production and distribution of various, autonomous media (print, TV and radio) took advantage of technological developments and opportunities to converge and identify crossovers in order to complement and reinforce each other. For many Higher Education Institutions it all started with a background in ICT or media production. In the case of the CIGN project partners, the latter meant print media. Now, the partners are all part of a much larger domain: the creative industries. As such, an overview of various successive studies and policy documents constitutes a reflection of a sector in transition and transformation.

In recent years, creative industries have become increasingly attractive to governments outside the EU and the developed world. In 2005, the United Nations Conference on Trade and Development (UNCTAD) XI High Level Panel on Creative Industries and Development commissioned several studies to identify challenges and opportunities facing the growth and development of creative industries in developing countries. The creative industries have shown increasingly their relevance to economic well being, underscoring that *'human creativity is the ultimate economic resource'* [9] and that *'the industries of the twenty-first century will depend increasingly on the generation of knowledge through creativity and innovation'* [10].

2.2 The establishment and operation of Sector Skills Councils in the European Union

Evaluating relevant reports and policy papers provided a privileged look at how initially ascertaining future skills needs for manpower planning in certain companies/sectors, evolved into a more general assessment of skills needs to inform all stakeholders, including HEIs.

2.2.1 Investing in the Future of Jobs and Skills

Ensuring the availability of appropriate skills and competences is imperative for the future of competitive European creative industries³. To ensure a better match between the skills supply and labour market demands for qualified manpower, the EU undertook major research in 2007. A total of sixteen sectors were selected and studied from 2007 onwards, one of them being the printing and publishing sector [11]. The final results of this comprehensive analysis of emerging competences and economic activity in the printing and publishing sector were published in the report, 'Investing in the Future of Jobs and Skills' [12].

This thorough report analysed sectorial trends and developments in print and publishing combining secondary research and expert information to present a number of options and recommendations to tackle future skills and knowledge needs in the publishing and printing sector. By adopting a uniform methodology for all sixteen sectors⁴, the total package of sixteen studies allowed policy makers to adopt human resources and management strategies and to devise mechanisms for better and more effective interaction between innovation, skills development and job creation.

³ This chapter is partly based on Bouters, Luk, New skills for the printing industry appeal for new approaches in education, International Circular of Graphic Education and Research, No. 4, 2011, p.58-61.

⁴ The report provided a methodology to improve the capacity of the EU Member States to assess and anticipate future skills need of employers and employees in the print media industry. This methodological framework was initially developed by Maria Joao Rodrigues (2007) and commissioned under the European Community Programme for Employment and Social Responsibility – PROGRESS (2007-2013).

Content

The actual report on the printing and publishing sector features three major parts followed by a series of recommendations. Part I provides a thoughtful and concise overview of the sector including current developments and trends. This serves as a basis for Part II, where statistical data is probed and extrapolated to construct four potential scenarios for the printing and publishing sector and implications for desired competences in various job functions. In the third part, the report describes the main strategic options to meet the identified skills and knowledge needs. The report concludes with a set of recommendations for policy makers, sector representatives and education and training institutes. The advice and conclusions were discussed during a final workshop with representation from social partners, the industry and other experts.

Recommendations

Most of the recommendations are addressed principally to vocational education and training programmes and aimed toward changes at national rather than international levels. Clearly, the most important recommendation for all education and training institutions is to keep up with the changes in skills needs. This does not limit itself to technological developments, but also refers to the management of an ageing and shrinking workforce, changes in consumption patterns and customer demands, and the emergence of new business models. The convergence of technologies and markets make inter- and multidisciplinary competences a key asset to enable prompt adaptation to these changes. Soft skills (languages, (self-) management skills, problem solving skills, an inclination to lifelong learning and innovation, and entrepreneurships) will increasingly gain importance in all job functions but especially for highly skilled professions, although technical skills remain indispensable. Emerging competences of higher skilled jobs will attach greater importance to how to learn, how to communicate, how to interact with colleagues and customers, as well as how to adapt to changing environments in addition to continuous performance in high quality education.

Due to the prevalence of SME's in the sector with their limited resources for upskilling and retraining of their staff, training facilities must be sought externally. Some recommendations therefore call for more flexible and less formal training forms, including promoting e-learning and modularisation, and supporting the establishment of regional training networks in order to make the latest equipment available to a larger group of training providers. A better flow of information between the industry and the training institutions on new skills and knowledge needs should bridge existing and future gaps and should steer career and training guidance for employees.

Based on the findings of the sixteen reports, some general conclusions may be drawn. All sectors will increasingly be forced to focus on more flexible communication with customers, a higher degree of flexibility in satisfying customer needs, and an increased need to use on-line technologies. Further, the report stresses the importance of good communication skills, problem-solving skills and analytical skills. With regards to entrepreneurial skills, the reports highlight the importance of understanding customers and process optimizing skills. However, the largest increase in importance was found to be a high level of flexibility and also stress and time management.

Remarks

Most (if not all) of these recommendations elicit a 'd  j   vu' effect. The major benefit of this list of recommendations, lies in the very fact that they are grouped and, based on recent data and experience, underscoring again the same major points and possible solutions. The results and

recommendations from the studies are intended to form a useful guide for the attention of European, national and regional educators and administrators enabling them to qualify and substantiate their choices and actions to promote stronger synergies between innovation, skills and employment.

The production context for print media companies has since the time of the study not changed that much and the problems identified remain the same, illustrating the inability of the sector to pursue collective action plans. The latter is due to the fact that the sector consists mainly of relatively small companies.

In the end, the Executive Summary [13] petitions for collaboration and joint actions by all stakeholders in order to address future skills and knowledge needs and to agree on and implement a package of feasible solutions. With little or no supplementary resources at national levels to finance such ventures, it remains doubtful whether this colloquial language will be sufficient to meet this noble appeal at all levels intended. This is especially so when recommendations such as modularisation, e-learning packages or individual career guidance require considerable additional (human) resources that are presently non-existent.

2.2.2 New Skills for New Jobs: Action Now

Context

A second key report, 'New skills for New Jobs' [14], is a EU policy initiative to meet the recommendations expressed in the previously discussed Investing in the Future of Jobs and Skills (2009) report and aims at achieving a better match between labour market needs and available skills. In 2009 a group of experts was asked to provide independent advice about how to proceed and accomplish the EU's future strategy, Horizon 2020⁵ [15].

Content

This report principally focuses on the desired key actions to ensure that a qualified work force is in place to meet the requirements of tomorrow's labour market and to cope with the challenges of global competition. The need to anticipate changing skills needs in a regular, systematic and consistent manner across the whole of Europe and to better align skills demand and supply has now been recognized. The report draws attention to the practical steps that need to be taken in education and training to provide citizens with better opportunities to succeed in the labour market [16]. Better formal and informal education is believed to be the right answer. For this purpose four major, complementary recommendations were developed. The authors make it clear from the outset: future prosperity will depend greatly on how successful Europe becomes at broadening and raising skills levels of its future workforce. The central role of education and training institutes and the prerequisite of increased investment in education to achieve this ambition is crystal clear.

Recommendations

In the report a number of the key actions are identified:

1. Provide the right incentives to upgrade and better use skills for individuals and employers.

⁵ Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness.

2. Bring the worlds of education, training and employment closer together.
3. Develop the right mix of skills.
4. Better anticipate future skills needs.

These recommendations contain valuable and interesting policy views and advice. These include the first group of recommendations where the report pleads in favour of better defining curricular standards, including the learning outcomes [17], and the various mechanisms of quality assessment and evaluation deployed in an educational context.

The second recommendation calls for a more substantial and intensive relationship between skills providers and employers in order to ensure that people receive the most appropriate qualifications and understand from the very start what is expected from them at the end of the learning pathway. To this end, a European qualifications framework, including outcome-based qualifications, should be developed. These learning outcomes should be based on labour market needs analyses and their introduction should be supported by appropriate pedagogy and assessment methods. This process requires the commitment of all, especially political leaders, and needs to be carried out by all stakeholders including educational institutes, employers' organisations and trade unions. These key recommendations end with a call to open up the learning groups to encompass a larger audience, including vulnerable groups and adults with or without prior work experience.

The third recommendation stresses the need for soft and more generic competences in addition to the technical skills required for a specific function. Apart from e-skills and digital fluency, higher education should embed key enabling competences such as creativity, innovation, entrepreneurship and citizenship. To monitor this process, education providers require quantitative targets. This endeavour asks for an appropriate learning environment involving consistency between learning outcomes, assessments, methodologies applied and the teaching corps deployed. Obviously, this novel paradigm of practice-oriented curricula might entail a review of the present curricula for teachers' education to ensure education professionals graduate with the appropriate skills and practical experience.

The last cluster of recommendations draws attention to the necessary development of early warning and matching systems to better anticipate future skills needs. Aggregating national and supra-national intelligence through various surveys will be key to develop measuring tools to pinpoint and foresee skills gaps, shortages, surpluses, as well as over- and under-education. Through the development of comprehensive tracking systems, learners' success in the labour market can be monitored and the delivery capacity of educational institutions assessed. The fourth recommendation ends with a call to *'create EU sectorial councils, bringing together existing national networks at EU level for the analysis of the skills needs and the development of proposals for updated qualifications in each sector'*.

This report and its recommendations, paved the way for a pan-European follow-up project aiming at establishing sector councils to strengthen collaboration between industry, social partners, and the educational and training institutions.

2.2.3 Sector Skills Councils on Employment and Skills at EU level. A study into their feasibility and potential impact

Context

Training and skills sit at the heart of any agile economy. A society can only be as economically innovative and effective as the skillsets of its populations allow. It is the responsibility of policymakers and educators to create programs to tackle the skills demand systematically [19]. Sector skills councils are platforms where stakeholders seek to gain insight into likely developments in employment and skills needs, with the aim of assisting policy making within or for this sector. Transversal councils are similar to sector councils, but cover trends and developments in two or more sectors of the labour market. In 2010, 27 country reports were published introducing and portraying various existing Sector Skills Councils in the EU [20]. The 22 states surveyed feature a great variety of different bodies working on skills at national and sectorial levels in order to provide information to different stakeholders.

In pursuance of a recommendation formulated in the report mentioned above (cf. [12]), the EU commissioned a study to examine the feasibility of establishing more uniform sector councils. With this decisive step the EU wanted to institute a structural and coordinated dialogue in as many sectors as possible with a view to:

- Acquire a deeper understanding of skill needs at the sectorial level,
- Contribute more effectively to the development of skills governance at the sectorial level and of national skills policies by facilitating capacity building and peer-learning amongst national skill observatories or equivalent organizations,
- And to foster intersectorial collaboration by creating a European platform of exchange and development of joint sectorial skills projects.

Such Councils could be composed of key stakeholders of a particular economic sector including representatives from trade unions and employer organizations, members of education and training systems as well as other relevant actors involved in economic development.

Content

In total 44 different councils were identified in 22 member European Union countries, leaving five countries without sector skills councils. The main reason for the latter is that in certain member countries (e.g. Germany) bodies other than sector councils operate to link the world of work to the world of training thus adding to the great variety of different bodies dealing with skills identification. The fact that so many member countries have councils signifies the importance member countries pay to optimizing skills training in their initial and continuing education systems. Five sectors were selected for a more in-depth study of the feasibility. The final selection included sectors for hotels, restaurants and cafés, construction, ICT, textiles and clothing, and hospitals.

A very important finding was that there were more transversal than sector councils. These councils deal with a series of sectors concurrently. The reason for this is assumed to lie in the organizational model adopted by small states (such as Luxembourg) and in the fact that countries with a sectorial model simultaneously have umbrella transversal councils to discuss issues of common interest. Next to national councils, in a limited number of member states, councils with regional responsibility, mainly with a transversal scope, exist. This could be in initial and/or continuing education.

International co-operation between sector skills councils is rare, but the respondents to the survey expect EU level Sector Councils to boost the effectiveness of national councils and to have a positive impact on the responsiveness of education systems to future labour market needs.

Establishing institutional frameworks to monitor and analyse changing skills needs (both quantitatively and qualitatively) are important elements in the prevention of market failures. Government policy makers and expert groups both at an academic or consultancy level still mainly tap this labour market intelligence. This report advocates making such information available to all labour market participants.

This report highlights the fact that various forms of cooperation and partnership exist and connect different bodies (ministries, employers, trade unions, and education providers) and channels labour market information into the education sector. *'Some countries have also opted for the direct regulation of education and training supply based on employment forecasts. Furthermore, many countries have implemented quality assurance mechanisms that allow for performance monitoring and feedback. Finally, virtually all European countries are in the process of establishing qualification frameworks that provide additional mechanisms to link education and training provision with labour market requirements'* [22].

Recommendations/observations

Most countries have some kind of system for skills forecasting, but they vary greatly and are to a large extent determined by the existing statistical infrastructure and the country's history in approaching this issue. Unsurprisingly, the creative industry sectors are still very young and diverse, and some of components are of a recent origin while others are long-standing economic sectors such as the printing industry with well-established networks and research institutes.

There has been a general shift in the objectives of these councils. From identifying future skill needs for manpower planning, to developing an institutionalized process of detecting the required skill portfolios and opening this information up for all stakeholders, including HEIs. Indeed, with regards to media design and production, only recently have the specialized HEIs and their international networks been more actively and systematically involved in this process.

Given the variety and complexity of existing systems, there is a clear desire to come to a more uniform approach but especially to make the data available more accessible and exchangeable. *'The case for a pan-European system for skill needs anticipation is generally accepted and the Cedefop work has begun to fill this gap. But much more remains to be done, although various initiatives are in place to move things forward, including the EU Skills Panorama'* [23].

The various approaches to tackle the issue of skills identification in EU's creative sector are an example of this. Although a lot of research has taken place to gather data on the sector's composition and economic value. Little has happened to bring all the stakeholders from the various sectors together in one single forum to identify new competences. This is largely explained by the broad nature of the creative sector and the histories of the respective participants.

It was observed that the objectives envisaged within the scope of study show overlap with existing EU initiatives such as the European Qualifications Framework (EQF) the European Credit Transfer and Accumulation System (ECTS) and the European Credit System for Vocational Education and Training (ECVET). The report therefore recommends attuning and a good exchange of information between

these institutions. On the other hand, it was felt that a strong sectorial focus would make intensive cooperation useful, such as the restructuring forums. With regard to the European Social Dialogue at sector level, it was recommended to focus on information exchanges and to avoid discussions on social issues. Intensive cooperation with the European Centre for the Development of Vocational Training (Cedefop) initiatives for forecasting and anticipation tools (such as the European Monitoring Centre on Change) and the sectorial studies commissioned by DG Employment was also advised.

The study also revealed a strong interest from the education sector to determine future employment skills needs and to dialogue with the social partners on future needs. The study therefore suggests that the councils to be should also encourage involvement of the education and training sector, as well as to align future labour market demands with education supply. To this end, the study advises the inclusion of a representative from the HEIs in the various councils.

2.2.4 New Skills for New Jobs. Policy initiatives in the field of education: Short overview of the current situation in Europe

Context

This research report [24] is a follow-up of the initiative ‘New Skills for New Jobs’ (see above) and aims to promote an improvement in skills forecasting and matching the supply of skills to the needs of the labour market through improved collaboration between the market and education.

Content

The summary report is composed of four sections. *‘The first section focuses on recent national initiatives in the area of forecasting and matching skills with the demands of employers. It looks at the development of methods, approaches and tools for forecasting the skills that will be required, and it provides examples of the range of measures taken to ensure that available human resources match labour market needs. The second section provides information on the institutional mechanisms required to forecast and address the demand for skills. This includes arrangements to ensure that the results of work on the identification and analysis of skills is fed into the planning and design of education and training systems. The third section offers concrete examples of policy initiatives and education reforms introduced in response to labour market needs. This section illustrates current European trends in skills, competences and learning outcomes in various aspects such as curriculum design, teacher training and assessment. The final section focuses on the impact of the recent economic crisis on education systems and on the transition of young people from school to the labour market.’ [25]*

Conclusions

Most countries rely on their own institutional mechanisms to ensure that labour market information is fed into the planning and delivery of education and training. To do this, a variety of different forms of cooperation and partnership exist and are deployed to connect different stakeholders (ministries, employers, trade unions, and education providers) and provide the education sector with labour market information. Many countries have established national quality enhancement mechanisms that allow for performance monitoring, accreditation and feedback. All European countries are in the process of establishing qualification frameworks that provide additional mechanisms to link education and training provision with labour market requirements often in concordance with the supranational EQF.

The policies, strategies and reforms in education intended to reinforce responsiveness to labour market needs, take a variety of forms ranging from comprehensive measures to more targeted approaches. Comprehensive strategies connecting education and training to the labour market cover the following main areas including curriculum reform, education and training of teachers and trainers, student assessment, and quality management [26].

The report noted a striking difference in approach between the vocational training sector and the higher education sectors. The former has been subject to more comprehensive, consistent and strategic reforms. With regards to higher education, the reforms are more disparate and limited to specific sectors of the economy and comprehensive reforms are therefore rare.

It is noted again that several countries took significant steps to implement a more flexible and transparent transition between the different levels and segments of education, especially between vocational and non-vocational paths. There has also been a general shift towards skills and competence-based frameworks in education and training provision at all levels. Furthermore, internships and apprenticeships have been introduced and have seen their program weight increasing both in vocational and higher education settings.

A final significant but not unexpected outcome of the research project was that, in recent years, education-decision makers have become more responsive and sensitive to economic changes and labour market needs due to the economic crisis.

2.2.5 Future Skills in the Graphical Industry

Context

This project [27] is a follow-up on the recommendations formulated in the previous two reports and was executed in the context of the European Social Dialogue policy and programme. The New Skills for New Jobs agenda stressed the need to anticipate the ever-changing skill needs and consequences for training and education providers. The rationale for timely anticipation was elaborated in a report [28] published by the Warwick Institute for Employment Research commissioned by the Cedefop. The final report of the project 'Future Skills in the Graphical Industry. Identifying and promoting best practices in Europe' was presented at a closing conference in Berlin (October 2014) and attended by two partners of the CIGN-project.

Content

This project, commissioned by the EU and initiated by Intergraf and UNI⁶, aims at establishing the crucial stages of the skills identification process and of the training solutions deployed. The above report does not describe current educational frameworks or existing national procedures or practices in use for the design of new educational programmes. It does, however, have a prime focus on the lower Vocational Education and Training (VET) institutes although a number HEIs contributed to the survey.

The survey adopted a dual approach. Following secondary research on the present situation of the industry and VET education across Europe, it describes the best practices adopted to introduce new

⁶ UNI Global Union, represents more than 20 million workers from over 900 trade unions in the fastest growing sectors in the world, including graphical and packaging. <http://www.uniglobalunion.org/about-us>

skills training. To do this, the researchers distinguished the traditional printing industry from what they called 'the new media and digital industry'. According to their findings, VET schools took the lead in identifying entirely new job profiles, while the industry took the lead in strengthening skills in more traditional roles. Not surprisingly, the role of the social partners was more present in the latter. Case studies highlighted the fact that it could take up to three years of response time before a new educational programme was formally accepted and the course was finally up and running. VET schools specially react more slowly when it came to introducing new educational programmes than adult training courses. This is mainly due to formal (government) regulations and procedures. Following four case studies from the UK, the Netherlands, Spain and Malta, different scenarios for skills development are presented. The survey then describes the best practices for identification and development of skills in courses for vocational education. The survey shows that businesses on the cutting edge pursue their own training policy and do not depend on or rely on the formal education system or the availability of training programmes to instil new skills. In addition, the majority of the businesses 'go with the flow' and follow the path set by their competitors to delineate their skills training programme.

Recommendations

The recommendations formulated within the framework of this survey were summarised as follows:

- Social partner-guided VET development works well in the traditional industry but is less suited, in its current form, to the faster moving "new media"; involving different and evolving networks to be implemented in the processes;
- VET schools, employers and trade unions have a joint responsibility and interest in an "early warning" role in technology/skills changes;
- Employers at the leading edge of the industry should be supported at EU and national government levels as pathfinders in new skill development.

Comments

The description of the best practices for new skills identification and course development is solely based on and derived from existing practices in EU member states and refers to successful new training packages for lower VET.

3 Some concluding remarks

This CIGN report on the process of identifying new skills evaluated the increasingly vital link between shifting technological trends, labour market activity and the skills demands.

The findings are very timely and meaningful as our society attempts to come to grips with the opportunities of today's technology while simultaneously addressing the need to prepare for tomorrow's technological innovations. For HEIs, this complex situation is very challenging as new functional and professional profiles are often already (long) in existence before the inherent skills are formally defined by the current official bodies.

The question of up-skilling the workforce became central when researches outlined how Europe's competitiveness became at risk. The impact of the economic crisis and subsequent recession has been severe and the future for the labour market in Europe remains quite uncertain. Today, even after years of recession, it is clear that it is not possible to predict the future precisely. Despite this,

many broad trends continue, in particular the shift towards a more knowledge-based, automated and service-oriented economy. The availability of reliable and sufficient intelligence for decision-making on the appropriate skills remains crucial and can help the European HEI sector to develop future curricula.

This report also describes the transformation of the skills portfolio as this sector evolved into the creative industries's. Generally speaking, the successive changes in consumer trends and technology, the European Union's policy and that of the national governments to foster a knowledge society and economic growth, combined with young people's desire to invest more in their personal development, have fuelled the importance of more generic competences. These include flexibility, entrepreneurship, personal and professional autonomy, and a willingness to attain continued professionalization. Sectorial and technological change will have significant implications for skills. But it is not all in favour of high-level skills; a demand for lower technical skills levels remains in areas where it is not possible to automate and where artisanal production methods exist.

Today, most countries have anticipatory measures in place and others are building and developing systems for skills forecast. Diversity still rules, but all have one common objective: to improve the match between labour demand and supply. There is, however, a growing demand and petition for anticipation systems at pan-European level to deliver comparable data on future (skills) challenges across Europe. The EU is speeding up efforts to come to a more standardized, structural and uniform approach through the establishment of (trans)national councils. The implementation of the EU's policy recommendations and action plans remains the most difficult point. There are a number of European Commission's programs such as ERASMUS+ which provide support to translate and turn policy into practice. This will help a lot but is clearly not sufficient to deal with the challenges lying ahead.

These funds are made available to support the development of the education and training sector across Europe. This includes networking, knowledge sharing and exchange of good practices to build a more agile and responsive educational system.

As HEIs and other training institutions are gearing up to better respond to the skills demands from industry and to the personal preference of students for new media applications, the supply of formal qualifications is also rising rapidly. Notwithstanding this, the development of new training programmes takes time and resources. But when the available qualifications lag too far behind, companies react quickly and take the lead in developing further training of their staff themselves. Professional development through on the job-training and on-line learning might provide an adequate answer to the former. But education is not just only about employment and jobs, it is also about people taking their lives in their own hands and shaping their future.

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