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CONTENTS

INSIGHTS INTO THE PUBLIC POLICY PROCESS OF THE IMPLEMENTATION OF THE EUROPEAN QUALIFICATIONS FRAMEWORK

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Abstract *– This paper attempts to describe the major relevant national and European developments in respect of the implementation of an NQF pegged towards the EQF. This shall serve to identify insights into the public policy process in this context by making reference to the Maltese experience were relevant. A brief synopsis of political and demographic considerations sets the policy background at both European and national level. The role of stakeholders, and the operation of the implementation, shed light on theoretical insights of how power is managed in a defined context to implement such a policy initiative. The paper also considers the policy process in terms of its relationship with European integration theories, namely federalism, inter-governmentalism, functionalism and neo-functionalism.*

Key words: *education; employability; EQF; general education; higher education; referencing; MQC; MQF; NQF; public policy process; politics, power; theories of integration; VET.*

Introduction

Making Europe "the most competitive and dynamic knowledge-based economy" (European Council, 2000) tables a number of policy needs for education. This is reflected in how education is defined, how it is developed, delivered, achieved and transferred. The usefulness of education is put directly in the limelight towards providing what is necessary to achieve such ambitious targets. This incorporates initiatives for the required tools and policy direction to build excellence in education which would correlate to building a stronger skilled workforce able to sustain the economic and social targets of the continent.

Functional ties and interlinking of European economies and societies through progression of European integration has led to an increasing role of the concept of mobility within the Union. Mobility, thus being a recurring theme in European integration, expresses the necessity for coherence in effort and understanding of systems within an agreed structure. Co-operation in education in its various levels has featured as a crucial part of integration of cultures, societies and economies within Europe. The major concerted European-wide efforts in recent history are the Bologna and Copenhagen Processes, the results of which has developed two over-arching meta-frameworks – the European Qualifications Framework (EQF) for Lifelong Learning, and the Qualifications Framework of the European Higher Education Area (QF/EHEA) for Higher Education.

The European Setting

The Bologna Process

As research, communication, technology and transport developed at an unprecedented pace, the drive towards higher education co-operation across Europe followed. 1998 marked the political commitment between France, Italy, Germany and the United Kingdom to encourage "a common frame of reference, aimed at improving external recognition and facilitating student mobility as well as employability" (Sorbonne Joint Declaration, 1998). A year later, European Ministers responsible for Higher Education signed the Bologna Declaration which paved the way for establishing a European Higher Education Area (EHEA) by 2010, referred to as the Bologna Process. The Declaration clearly identified the primary objectives both in terms of policy priorities as well as systematic structural commitments towards this approach. Harmonisation of structured credit systems led to a defined role of the Bologna Process in promoting comparability and transfer of credits and qualifications. Quality Assurance has acted as a foundation to implementing successful mutual recognition systems in order to encourage mutual trust among countries.

The Bologna Process established the Qualifications Framework for the European Higher Education Area (QF/EHEA) which is based on short-cycle first-cycle qualifications, first-cycle qualifications, second-cycle qualifications and third-cycle qualifications. These levels are based on the Dublin Descriptors (MSTI 2005, 57) which are built in:

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- Knowledge and Understanding
- Applying Knowledge and Understanding
- Making Judgements
- Communication Skills
- Learning Skills
-

The Bologna cycles correspond to Levels 5 to 8 of the EQF respectively.

Copenhagen Process

In parallel to the Bologna Process, the Copenhagen Declaration launched in 2002 by European Ministers responsible for Vocational Education and Training (VET) and the European Commission, acts as a defining statement towards furthering co-operation in VET across Europe. The Copenhagen Process aims to improve the performance, quality and attractiveness of VET in Europe in the context of Lifelong Learning (LLL). Bi-annual Ministerial meetings have followed the first meeting to track developments and update priorities and initiatives. The latest Ministerial meeting of the process was held in Bruges. It outlined the importance of quality VET education, which is being addressed by the setting up of various initiatives such as the European Quality Assurance Reference Framework (EQARF) and the European Network for Quality Assurance in VET (ENQA-VET). The establishment of a European Credit System for Vocational and Education System (ECVET) shall evolve into a solid policy tool for mobility in VET.

The European Qualifications Framework for Lifelong Learning

The EQF was proposed by the European Commission in 2006. The Recommendation (European Parliament & Couincil 2008) calls upon member states to link their national qualifications systems and the EQF meta-framework. The EQF encompasses general, VET and higher education and therefore encourages permeability between different forms of education. The framework is designed upon eight levels and based on a learning outcomes approach defined in knowledge, skills and competences, irrespective of the mode or duration of learning. The EQF seeks to bridge various stakeholders in the understanding of different national qualifications systems in terms of what the learner achieves at the end of a learning experience. The ideology and implementation of the setting up of the meta-framework, supporting both the Bologna and Copenhagen Processes, contributes to increasing quality, recognition, notions of parity of esteem, up-skilling and employability of European labour. Both the EQF and the QF/EHEA are based on a learning-outcomes based approach and can therefore be inter-related.

The EQF Recommendation established two main targets. The first is that all participating states to establish a methodology of referencing their respective national qualification systems to the EQF by 2010. The second states that all new qualifications issued beyond 2012 are referenced to the EQF and bear its label on certification.

The EQF Advisory Group

The EQF is steered by the EQF Advisory Group which is chaired by the Commission and involves participating states and European stakeholders and social partners. CEDEFOP and ETF provide technical expert support to the Advisory Group. The Council of Europe (as the body responsible for the implementation of the Bologna Process) is also invited to the Advisory Group meetings. As laid out in the EQF Recommendation (ibid, 3), the Advisory Group is responsible for "providing overall coherence and promoting transparency of the process of relating qualifications systems to the European Qualifications Framework". The Advisory Group has agreed on ten referencing criteria and relevant procedures for referencing national qualifications levels to the EQF (EQF Advisory Group 2009).

National Qualifications Frameworks

National Qualifications Frameworks (NQFs) are tools for the organization of qualifications according to agreed standards for specified levels of learning achieved. Transparency, access, progression and quality of qualifications in view of both the labour market and civil society, are the main aims. NQFs are not a stated pre-condition to referencing national qualification systems to the EQF. However, the vast majority of countries that have referenced, or are in the process of referencing, their systems to the EQF, have opted for this approach. Most countries benefit from NQFs in a number or all of these forms (Bjornavold & Coles 2010, 15):

- Increased consistency of qualifications
- Better transparency for individuals and employers
- Increased currency of single qualifications
- A broader range of learning forms are recognised
- A national/external reference point for qualifications standards
- Clarification of learning pathways and progression
- Increased portability of qualifications
- Acting as a platform for stakeholders for strengthening co-operation and commitment
- Greater coherence of national reform policies
- A stronger basis for international co-operation, understanding and comparison.

In this context, the EQF has acted as a guideline to countries generally in the design of their NQFs. Nevertheless, the EQF is a framework that acts as the basis to linking NQFs and is not a prime framework which has to be benchmarked against indefinitely. It must be viewed through the lens of national priorities established between the policy-makers, stakeholders and education and training providers.

EQF Policy-Making and Implementation on a National Level: a Continuous Process of Consultation and Dissemination

The setting up of a NQF cannot depend on a sole driver drafting a complete framework and in turn expect it to be adopted by all stakeholders concerned automatically. Apart from possible lack of co-operation and understanding by stakeholders, another issue is that the NQF may not incorporate the needs and environments which the individual stakeholders or social partners may be aware of and be able to identify. Therefore in order to build an NQF which truly encompasses the national qualifications within the particular exigencies of that country, as well as ensure commitment to implement and adherence to the NQF, stakeholders and social partners need to be brought on board. The case of Malta exemplifies this approach.

First and foremost, stakeholders and social partners understand the benefits of building and implementing the NQF, and also to have it referenced to the EQF and the QF/EHEA. In the Maltese case, the body responsible for the establishment of the NQF, and later for its referencing to the EQF, is the Malta Qualifications Council (MQC). The governing board of MQC in itself represents an array of social partners and stakeholders. For instance, it includes members from the main public training providers, employers and labour force representatives, as well as representatives from the main body which brings social partners together (the Malta Council for Social and Economic Development – MCESD).

Malta's Referencing Report (MQC 2010a, 114) explains how the first draft was devised by MQC but was finalised in June 2007 following a number of consultation meetings with individual stakeholders including student bodies, education and training providers, social partners, NGOs, and political parties, spanning over six months. The subsequent step was to spearhead implementation of the MQF. This could not have started, nor gained the required momentum, without the direct involvement and shared ownership by stakeholders. MQC adopted a versatile approach towards consultation. Alongside a structured path, MQC was also flexible to consultation and stakeholder involvement.

MQC published a number of policy documents as a basis for further consultation. The production of printed material for dissemination purposes has been continuous. MQC has also capitalised on an array of focused project-based initiatives which in themselves served to address particular topics concerning the EQF and all its aspects. These in turn served as consultation and dissemination opportunities. Participation in media, national events and publicity campaigns has also been crucial to raising awareness, attracting different audiences of the general public. Media involvement included through radio, TV, web-based and print media, together with updated online presence through MQC's frequently used website.

Consultation conferences and seminars were also organised over various stages of the setting up and implementation of the MQF. MQC also held information seminars on the EQF to stakeholders. Such conferences and seminars have also been applied through a target-group approach. Over the past years, MQF/EQF consultation and implementation awareness events have been based on attracting target groups in order to meet their needs and contextualise the discussion according to their environment and relevance. As an example, between 2010 and 2011, MQC ran a total of six seminars entitled *Post-Referencing: Information and Training Sessions*, supported by the European Commission. These sessions targeted the following stakeholders:

- Public Entities;
- Providers of VET and Higher Education;
- Private Training Providers;
- Workers' Representatives;
- Providers of Compulsory Education;
- Employers and Employers' Associations.

On the other hand, consultation events addressed to a broader general audience of stakeholders have also been organised when the topic was more focused towards a general discussion and understanding of needs amongst stakeholders. Such an example is the *National Colloquium on the Proposal for a National Awards System Referenced to the MQF for Lifelong Learning* held in February 2011. This consultation conference launched MQC's proposal for a National Awards System describing all possible forms of awards by definition, workload, credits, level of difficulty, and education sector, for easier understanding and recognition of what the learner has achieved. The event focused on a presentation of the proposal followed by structured interventions from key stakeholders to fuel the debate. It brought together a vast range of social partners and stakeholders being affected by such a proposal.

The building of sector skills units and establishing relations with representatives of sectors has also featured as an ongoing process. MQC has also been avidly open to continuous one-to-one consultation meetings which provide for tailor-made discussions according to the need and situation of stakeholders.

The Policy-Making Context – the Forces

Policy-making occurs within a context of forces. The cultural, social, economic, political and legal fabric of the environment within which policy-making happens varies the shape of matters. Contextual forces influencing the policy agenda have to be taken into consideration when evaluating policy-making and implementation. National situations as well as regional

or global forces all affect the balance of decision-making by establishing a specific background to the decision-making powers at stake.

Forces beyond our shores

The Bologna and Copenhagen Processes and the EQF recommendation were triggered through initiatives of European co-operation. Such co-operation is based in an advanced regional social, political and economic integration project – the EU. It also goes beyond this in attracting participation of other closely-tied European neighbours.

Europe has however, together with the rest of the world, undergone severe economic pressures in the last decade. Other regional economies have heightened their competitiveness vis-à-vis the EU. This has resulted in Europe having to build concrete political commitment towards sustainable solutions that can confront the challenges posed. Excellence and investment in sensible education systems with a view towards employability and developing the skills of the European workforce became an evident priority across EU policies. A central theme in European policy discourse is that of building a *knowledge-based society*. This goal emphasizes the role of quality education based on cooperation.

The EU 2020 strategy outlines education as one of its main targets. In brief, the benchmark targets for this sector are to reduce school drop-out rate below 10% and to have at least 4% of 30 to 34 year olds having completed higher education. These targets are part of a broader holistic strategy which identifies the need to have an employable skilled workforce that responds to creating a sustainable knowledge-based economy. Two of the seven flagship initiatives under the EU 2020 Strategy, namely *An Agenda for new skills and jobs* and *Youth on the move*, are also directly linked to education.

Mobility has become a target which is both a self-standing goal, as well as a goal intertwined in the greater realm of policies in employment and education. The EHEA, through the Leuven/Louvain-La-Neuve Communique, established the target of 20% of being mobile by 2020. Easier access to mobility cannot operate without adequate tools for mutual recognition and quality assurance.

Two factors tied directly and indirectly to mobility are demographic change and migration patterns. These social policy phenomena also implicitly affect the Union on an economic level. As these may vary according to regions: generic trends can be extracted and patterns can be identified together with the consequences of the realities they create.

Yearly population growth rates have declined close to the zero-saturation point. This can be mostly attributed to the drops in fertility rates, which despite occurring around the globe, seem to have higher tendency in Europe. Developed countries register the highest drops in fertility rates to alarming percentages (Lorant 2005,7). Life expectancy has also increased significantly, thus the lower rate of baby births compared with higher numbers in the higher age brackets causes' further prominence on the notion. Promoting employment through more jobs and longer working lives is one approach that the EU is suggesting to facing the problem (Commission 2006, 571). Nevertheless EU countries have only managed to maintain their populations through migration.

Political, economic, social and cultural problems, including under-development and political instability, are causing flows of migrants into the EU. This happened as the EU flourished and developed and therefore become more attractive. The Schengen Agreement also increased the attractiveness of migration into the EU since intra-border mobility become far less sophisticated. Nevertheless intra-community and extra-community migration by EU nationals is also causing major concerns to the respective economies. Labour migration causes an imbalanced trade-off of brain drain and brain gain between the receiving and sending country. To this extent, tying to the discussion of demographics, it seems that migrants can provide for the lack of labour in specific areas of employment. However this requires identifying the needs of the receiving country and recognising of migrants' competences in order to apply the migrants' skills or retrain migrants to become relevant to the needs of industry in that context. European and regional projects based on the use of learning outcomes for this purpose are being introduced on a piloting of sectors approach (Santanicchia 2011), whilst many other forms of initiatives for integration are being catered for at regional, national or European level (Boswell 2005, 7).

Relating these factors together, such as combining the analysis of the drive for the knowledge-based economy partially caused by the shifts of lower-end jobs to cheaper labour markets, together with migrants increasingly taking up low-skill jobs (Groom 2011) will start to reveal different aspects of skills mismatch. There are numerous popular middle-level job classes which are envisaged to reduce in the near future, whilst skilled workers are not working their field or below their field. On the other hand demands for highly qualified people will increase. At the same time routine jobs and skilled manual work will be replaced by technological developments (CEDEFOP 2010). Free market competition also leads to inefficient industries to relocate or lay-off workers. These considerations confirm the shift towards employability rather than jobs-for-life. This is why high quality education and a flexible and adaptable labour force are key concepts to this policy area.

Domestic Forces: Malta

The emergence of VET

VET is not a new concept to Malta dating to the 1960-70s setting up of trade schools. In the late 1980s and

the 1990s, however substantial reforms in the general education streams took place boosting the role and value of such education. This period saw the establishing of domestic post-secondary pre-tertiary qualifications systems in the academic sector (nowadays pegged at Levels 2 to 3 and Level 4 respectively). These followed the setting up of a National Minimum Curriculum for different levels of education, incorporating non-state education providers. More autonomous governance and decentralisation were introduced through reforms. The setting up of the Foundation of Educational Services (FES) has been crucial to the development and re-skilling of basic literacy and key competences support (MQC 2007, 13).

Although MQC does not directly regulate IVET and CVET, it regulates qualifications, particularly in the VET sector. CVET in Malta is mainly provided by the Employment and Training Corporation (ETC), the Directorate for Lifelong Learning (DLLL), the Malta College of Arts, Science and Technology (MCAST) and through an array of private training providers. IVET is mainly provided through MCAST via its nine institutes:

- Institute of Agribusiness
- Institute of Art and Design
- Institute of Building and Construction Engineering
- Institute of Business and Commerce
- Institute of Information and Communication Technology
- Institute of Electrical and Electronic Engineering
- Institute of Community Service
- Institute of Mechanical Engineering
- Maritime Institute

IVET is also offered by the Institute of Tourism Studies (ITS) which focuses on culinary arts, tourism services and hospitality management, which comprise of the tourism sector being an important economic field for Malta. Heritage Malta also provides inter-disciplinary training in the aspects of conservation, restoration and cultural heritage management (MQC 2010b, 27-31). There is also a wide range of private VET providers which are gradually but steadily, under-going a process of quality assurance through MQC which results in a vast portfolio of level-rated and quality-labelled domestic VET qualifications provided in Malta.

The total full-time participation rate in further and higher education in Malta is 20,561 in 2010. This is 119% higher than that of 2005 which was at 17,184, and 154% higher than that of 2000 which was at 13,360. VET participation at post-secondary level is at 6,227 in 2010, being the first year in which VET participation at this level exceeds general education at the same post-secondary level. The latter stood at 6,026 in 2010. Similarly one can note that part-time VET courses dominate even further the general education counterparts (NCHE 2011).

This a clear indication of greater involvement of VET in the Maltese context which may lead to understanding such education in terms of labour market needs and with a more realistic view towards parity of esteem with general education. Efforts to boost vocational education levels and initiatives at compulsory education level aid in improving the early school leaving rates Malta registers. Government has just introduced IVET initiatives in compulsory education. This seeks to further overcome the hurdles and paves the way towards establishing parity of esteem between VET and general education. This instils the culture from the very early stages of education.

Political Considerations

The political culture in Malta is considerably legitimate and accountable through open and transparent methods of checks and balances. The structure of Maltese politics is a two-party system where two strong parties are in direct competition to form a single-party rule. Political parties in Malta enjoy strong support and voter turnouts are relatively high when compared to worldwide participation in democratic elections (Pace 2004, 2009; Grech, 2009). This perhaps gives political parties a more central role in influencing the policy agenda.

Apart from vote-maximisation and office-seeking, political parties exist to influence policy in the direction they deem best (De Swann 1973, 88). Therefore the influential role of Maltese political parties sets them as very important stakeholders in promising the building of an NQF and the subsequent implementation of the EQF Recommendation. In this policy arena, it is clear that both major parties consider these significant steps as important for Malta. Nevertheless, due attention has to be given to the possible consequences of adversary politics (Finer 1974, cited in Hague & Harrop 2001, 177).

In economic terms, Malta does not possess any natural resources of its own. Until recent history, the economy relied on manufacturing of basic goods. The manufacturing industry nowadays only remains strong in high-end products such as micro-electronics and pharmaceuticals. Foreign direct investment is a substantial economic factor in Malta and therefore Malta needs to adopt a flexible approach towards providing the necessary skilled workers in the shortest time possible to remain attractive to investors. Emerging industries include on-line gaming, finance and the aviation maintenance industry. Taking the latter as an example, MCAST has procured the relevant courses in liaison with industry in a very short time and thus managed to attract the investor by preparing graduates equipped with the detailed skill demands of industry.

This flexible approach serves to face Malta's geopolitical vulnerability. Being an island, transportation costs are high for Maltese investors and therefore such flexibility helps in weighing out these disadvantages. The recent uprisings in North Africa have also shown that Malta's strategic position in the Mediterranean makes Malta highly sensitive to neighbouring political and economic events.

Demographic Considerations

In line with the general trends at EU level already discussed, Malta is experiencing lower fertility rates and higher life expectancy. In the case of fertility rate, Malta is featuring lower rates than the EU average with 1.44 births per woman compared to 1.6 births. Life expectancy in Malta is also similar to the average with men living slightly longer than the EU average (Eurostat 2010).

In terms of migration, Malta has around 4% of its permanent residents who are not Maltese. Migrants seeking asylum due to political and economic suppression in their homeland are a dominant portion of this figure (Camilleri 2011a). This results in a number of workers who may be unskilled, semi-skilled and also highly skilled, who however find it hard to adapt their skills to Malta's labour market. This could be due to lack of certification or due to language and cultural barriers. Many of these workers engage in employment which does not reflect their skills or job back home, such as working in the construction industry as unskilled workers. Up-skilling these workers to adapt their skills to the domestic labour market would integrate them to put their skills to the best use.

An additional factor to consider is that females in Malta record a low participation rate in the labour market, despite the number of higher education female graduates surpassing the number of their male counterparts (Camilleri 2011b). This is an untapped resource in the Maltese labour market and also resulting in skilled and semi-skilled female workers who voluntarily opt not to participate in the labour market. Participation rates have increased through government incentives set to encourage female workers to seek employment, such as tax incentives to mothers to return to the labour market and the policies towards flexible working hours and reduced workloads.

It is important that Malta achieves the best of its workforce. Malta is a small island state with a relatively small population. This imposes limitations on the Maltese education system in being able to specialise since there is no avenue to have large numbers of similar education institutions due to limited demand.

Policy Reflections

The Integration of Education

Education is a focal point in European integration. Education is a tool which not only improves and develops skills and knowledge of learners, but also a tool which forms and develops learners. Education influences the sharing and understanding of cultural and social norms between different cultures. Indeed, when commenting on the European integration project in retrospect, EU founding father Jean Monnet, stated that *if he had to do it all over again, I would start with education*.

Freedom of mobility within the Union is one of the basic principles of the European Union. This has to be reflected by the harmonisation of institutional procedures and practices which help remove barriers in practice. Nowadays, European mobility is no longer a matter of physical access into another member state, but a more in-depth value of harmonisation. Access to mobility is defined in terms of the opportunities and openings for learners to access education systems in another member state and for workers to access the labour market opportunities there as well. This is only possible through the recognition of the learner or worker's knowledge, skills and competences in view of what is needed by the education institution or employer relevant to the learner or worker. This recognition occurs through the establishment of mutually trusted and accepted procedures and institutional setups which bridge the understanding between the assessment and validation procedures that qualify the learner and worker in one country. Therefore the bridging of education systems and understanding between frameworks in Europe is essential to establishing freedom of mobility in practice.

This does not mean that European-wide convergence of education systems is necessary. The focus of this process should not be equivalence and convergence in the sense of stream-lining European qualifications and systems into one homogenous style and content. What is needed is the ability to understand the different systems, the achievements of learning experiences, and to understand the level and depth of the learning outcomes achieved.

Theories of Integration

The Imagination of a united Europe started well before the conception of the EU. Yet the vacuum for peace and development in terms of political, economic and social stability, was what triggered the interests of political thinkers to turn these dreams into a tangible European integration project (Urwin 1995, 7).

The EQF is another step resulting from and leading to further European integration. It is a necessary step which is not an initiative on its own. It is catalysed by developments in education and training policies and other more distinct policy areas. The emergence and development of the EQF provides a field for interpretation and application of integration theories which all appear throughout the history of European integration.

Federalism

Federalism poses emphasis on more immediate formal institutional changes. Federalists envisage legal changes in conventional legal and political structures resulting in new ways of administering influence in the policy field (O'Neill 1996, 22). Federalism is fashioned with the premise that member states can no longer be depended upon to guarantee implementation of the necessary

integration actions. Therefore a federalist approach would suggest a federal structure which would deal with the decisions best administered at this higher level, whereas member states would govern those decisions deemed most ideal to be governed by the units of the federal structure. This can further delve into regional or sectoral levels. This system creates a balance between European-level cohesion and member state-level autonomy, through the concept of shared rule (Elazar 1987, 12). Therefore the federal view would suggest multi-level governance in a pre-structured conditioned manner. The crux is finding the most adequate level of governance for each matter in the policy area.

The layout of the EQF implementation can be explained in a structured approach similar to a federal policy initiative. It is a clear EU-level initiative through the EQF Recommendation taken jointly by Council and the Parliament. Through the Recommendation, the EQF Advisory Group has been set up at European level to guide the referencing process of national qualifications system to the EQF. Co-ordination Points have been designated at a national level in order to be the referencing point and guide the process of relating to the EQF. These in turn have mostly engaged a structure national system to develop or strengthen NQFs. The processes, as reported through the various referencing reports presented to the EQF Advisory Group so far, involved structured systems of consultation and decision-making including ministries, agencies, quality assurance bodies and other stakeholders. This would in turn guide the training provision system within the country, which in itself is responsible for the provision and design of qualifications.

However, despite being able to lay out the EQF implementation in simple terms, in a federal structured multi-level governance, the process does not reflect a pre-agreed decision-making framework which constitutes a defined way of how the implementation operates. This will lead us to discuss another theory of integration which might have had more influence in this policy area, in terms of assessing the EQF implementation across Europe through the more gradual steps it has taken.

The Functionalist Approach

Functionalism aspired for an international community based on practical co-operation under the aegis of a supra-national authority by the gradual transfer of sovereign authority for the common interest of the participants. This theoretical approach advocates the application of gradual integration efforts in those avenues which are possible. These ties will result in a *spill over effect* in which one area or tool of co-operation will affect other areas or tools for co-operation in order to sustain the cooperation of the original area of co-operation. This phenomenon is described as:

> "…a situation in which a given action, related to a specific goal, creates a situation in which the original goal can be assured only by taking further actions, which in turn create a further condition and a need for more action, and so forth" – Leon Lindberg (1963, 10)

This would result in an eventual inter-locking web of joint co-operation enmeshing the world in functional ties. David Mitrany, father of the functionalist approach to European integration, insisted on a technocratic approach to administration of integration efforts. In the implementation of the EQF technocrats are involved in driving the integration of frameworks and systems. Nevertheless, as a criticism to this, all technocrats are influenced by, and depend upon, the support and agreement of politicians (Rosamond 2000, 40).

Stemming from the functionalist approach, the neo-functionalist theory recognises that integration projects on an immediate world level are not a realistic target and that technocrats on their own cannot manage the process (Heathcote 1975, 38). Neo-functionalism therefore explains the EQF process more aptly than federalism.

The EQF is a regional project, covering the EU member states and other co-operating countries. There are intentions of collaboration with other regional frameworks but the focus is primarily to establish a strong operating European framework. The EU through the EQF Advisory Group and the European Commission acts as the supranational authority described by functionalism. Different tools for co-operation emerge from the needs of the Union. For example, the EQF was needed as a functional tool to establish linkages for understanding between different frameworks to respond to employability and mobility needs. This spills over other areas of co-operation such as for example, the need to establish credit systems between institutions in both higher education (such as the ECTS system) and the ECVET system for VET. Another example is the ESCO tool to develop a collection of definitions as a spill over effect from the integration of frameworks in order to be able to understand definitions of terminology for the purpose of integrating frameworks. However, in itself the ESCO tool becomes a process of creating a dictionary of terminology which will live beyond its purpose and therefore this spill-over from the needs of integrating frameworks results in another area of co-operation, that of having a terminology which can be used for other purposes.

As a criticism to this approach, functional ties are utilitarian in nature and since they are bound to specific components, altering variables may prove that the functional ties become frayed and the functional bonds may erode (Etzioni 1968, cited in Harrison 1975, 116). In the case of the EU integration project however, this has not proved to occur to date, but rather that integration has led to more integration both in depth and spill-over into other policy areas.

Inter-governmentalist Considerations

Liberal inter-governmentalism serves as criticism to the federalist, functionalist and neo-functionalist theories. Unlike the other theories, there is no imposed pre-scheduled multi-level governance structure or natural means of transferring sovereignty to a supra-national authority. The role of the supra-national is moderated by the willingness of the individual nations to pool sovereignty in their own self-interest. The theory implies that the individual nations may retreat the pooled sovereignty and therefore it is the individual nations which are the power-bearers in the level of integrating policy (Moravcsik 1991, cited in Rosamond 2000, 136). Andrew Moravcsik (1993, 483) further argues that the interests sought on European level are the fruits of nationally-brewed interests, since governments are dueaccountable to their domestic electors.

The EQF Advisory Group is indeed composed of the individual member states and therefore gives them the power and authority to influence the process. It is also a voluntary process and it is therefore their decision to participate. Each country is given the freedom to develop its own approach to implement the EQF Recommendation and referencing to the EQF.

However, when it boils down to practice, the fact that all member states are participating in implementing the EQF shows that member states do feel an exerted political pressure to comply, despite being a voluntary process. The EQF Advisory Group also has substantial influence by the European stakeholders and the European institutions through the presence of the representatives of the European social partners, the Commission experts, the Council of Europe, CEDEFOP and the European Training Foundation. Moreover, the retreat from pooling of sovereignty may be an option, but its implications through what the neo-functionalist would refer to as the spill-over effect, would be too-devastating to apply. If referencing a country's NQF to the EQF results in employment procedures to refer to the EQF and thus facilitate mobility procedures, it would be near to impossible to dismantle the EQF referencing and thus result in confusing employment procedures and re-creating hurdles for mobility.

Insights into the Policy Process

Power

The implementation of policy depends on power, which Hague & Harrop (2001, 10) define as the currency of politics. Arts & Van Tatenhove (2004, 346-347) conclude that power is the organisation capacity of the agencies promoting a policy on their own or jointly, such as through the EQF Advisory Group. This power is however co-determined by the structural powers of the social institutions in which the agencies are embedded. Weber discusses the role of the bureaucracy as a fine piece of administrative machinery, which however, through its technical expertise and executive work, may influence decision-making or the implementation of a decision (Gerth & Mills 1946). In the case of the EQF implementation at a European level as well as at a national level, even in terms of setting up and maintaining NQFs, there are observations to be made on the role of technical bureaucrats vis-à-vis the democratically-elected politicians. The politicians respond to their voters, but rely on the direction of the bureaucrats in their decision-making.

This offers some reflections into Lukes' views of power in understanding the power of influence between the bureaucracy and the political decision-makers. Lukes' discussions on power are also reflected in terms of non-decision making. Non-decision making is in itself a way to exercise power. In countries were the EQF implementation process remains at a standstill, the nation, or respective ministry, is undermining the process by not implementing the EQF, despite the EQF Recommendation. Agenda setting is the process through which an issue moves from insignificance to becoming one of a limited number of priority issues that has achieved in gaining the relevant advances interest of policy-makers and is thus positioned for decisive action by the governing body (McLendon 2003, 482). Therefore the power to implement the EQF Recommendation depends on who the agenda setter is and what lies in their priorities.

Lukes' third dimension of power studies the power of influence by an actor over another rather than power through action (1974 28). The European-level power-bearers use their authority to convince the national entities that the implementation of the EQF is for their own benefit so that the national entities, in turn, convince the national stakeholders of the importance of implementing the EQF. The European power-bearers exercise the power of influence by guiding the national entities to determine that EQF implementation is in their best interest, whilst the national entities go on to influence the national stakeholders in the same manner.

Orientation of the Policy Process

The intended policy implementation approach for the EQF and NQF development is a combination of top-down and bottom-up. The structures are often centrally-determined through ready-made proposals posed for consultation. On the other hand the process both at European and national level involved wide consultation and seeks consensus rather than imposition (Coles et al. 2011, 35).

Rational choice theory would suggest, as in economic models, that the most rational way forward would be to seek the most efficient means to arrive to the self-interested goal, where self-interest in rational theory may also be reflected as the self-interested goal of the general community and citizen welfare (Cochrane & Malone 2010, 62, 83). Taking the implementation of European tools such as the EQF

as a suggested solution to improving and up-skilling the labour market during economic turmoil, the most rational way would be to go ahead with implementation in the shortest time possible, such as immediate change of legislation. However, due to externalities, such as the political class being considered as an imposing leader on such important issue as education, both the EU and national governments opt for a longer process to involve stakeholders through consultation and shared ownership of the process.

This approach suggests that the policy process applied is more pluralist than elitist. Taking the involvement of participating states and social partners in the EQF Advisory Group and at various consultation exercises and events, there is an adequate representation of social forces in order not to allow one single power-bearer to decide. The pluralist perspective does not specify that power has to be shared equally amongst actors, but that the representation of different actors ensures that power is not concentrated on one or a small circle of actors (Hix 2005, 209; Schmitter 1974 cited in Parsons 1995, 257).

This is also echoed on the national level. Malta's process involved broad consultation exercises and involvement of different stakeholders, as described. Therefore it is difficult to identify this policy scenario with the elitist approach of having a minority class concentrated with enough power to direct the larger masses (Mosca, 1939, cited in Hill 2009, 37). Even if the social partners and the political decision-makers are small circle of ruling class, the consultation exercises range so broadly in even involving one-to-one consultation, that even if the general public did not directly involved itself, it is in one way or other represented. However, even though the general public is in favour of the EQF implementation and similar tools, more awareness and understanding is necessary.

The change towards linking education systems and referencing frameworks can be interpreted in the same way as the provision of a public good through collective action. Taking on such a process by a private actor would not yield enough benefits to outweigh the costs and time required. Therefore the collective demand has to be addressed by the collective action of governments to commit towards the process. This also makes the leader of the process one which has recognised rational-legal authority as it is traditionally a central government entity rather than a self-interested private actor.

The free rider problem emerges even in the process, particularly with social partners and training providers that dedicate resources towards the implementation steps; the benefit of which would be enjoyed even by those that do not make any efforts. Asymmetric information may also lead to inefficiencies (Kay & Vickers 1988). Moreover, another problem is that large groups with different interests, such as the EQF Advisory Group, tend to find difficulty in reaching an agreeable collective action quickly.

The elements of non-rivalry and non-excludability of public goods can suffer from what is known as congestion. In the case of referencing national systems to the EQF, there are currently numerous countries wanting to present their referencing report. This may lead to less focused discussions and feedback. Whereas on a national level, the implementation of the referencing process results in a congestion of services related to the EQF referencing due to a huge influx of interest and participation, such as the level-rating of courses.

Game-sets can also be applied both to the European as well as the national experience. The Prisoner's Dilemma explores chances where both actors have most to gain if they both co-operate; suffer more if they both deflect; yet one will suffer the most and the other gain the most if one deflects and the other co-operates. This framework acts within a situation that does not allow one prisoner to know the intentions of action of the other, but has to pre-empt them. Adapted from Hill (2009, 99) we can use this to analyse where the participating member states participate in the EQF implementation, and also at national level where the stakeholders and training providers also participate.

	Country 2 / Training Provider 2		
Country 1 / Training Provider 1		**Cooperate**	**Deflect**
	Cooperate	Situation A 1:++, 2:++	Situation B 1:-, 2:+++++
	Deflect	Situation C 1:+++++, 2:-	Situation D 1:---, 2:---

Situation A explains what is happening so far. Countries are taking the necessary steps to reference their qualifications systems to the EQF. Qualifications are being translated into learning outcomes and QA systems are being put in place. The exercise of referencing is also a difficult exercise of consultation and consensus-building. Both countries are undergoing this process leading to costly and time-consuming measures which would at the end result in mutual trust and recognition that would allow learners and workers to move across their borders. In the case of the training provider, the situation is similar. The training providers are re-describing their qualifications in learning outcomes and adhering to QA systems, making the costs for producing the training higher, but on the other hand benefiting by having their courses recognised. Situation D would be a situation where both would deflect and therefore the EQF implementation and similar tools would not be pushed forward. Both the countries and the training providers would not benefit from mutual recognition and the benefits of these tools, yet avoid the costs and resources required.

The other two situations, B and C, reflect a situation where one country or training provider go through the burdens of referencing, level-rating, and quality assuring courses and the other does not. This makes the

country or the provider's courses potentially less costly and less complex compared to their counterparts as they are operating the same courses. However, despite that, the actor that does not implement does not have to go through the burdens, the game-set is not realistic in describing the long term effect. This is because the country or provider that does not implement would no longer have recognised qualifications in other countries or within the same country itself. Once the system is in place and other countries and providers are using it, it is the deflecting actor that would suffer and not the one co-operating in the long term.

The EQF implementation is therefore a policy process in which countries and providers adapt to change and modernisation in this policy area. Policy-making is an innovator in serving to steer education reforms and setting new mindsets. It is happening in a linear method with gradual targets of agreeing on level descriptors, translating into learning outcomes, referencing and quality assuring. It is an incremental approach whereby it develops more implementation steps, such as the implementation of the EQF/NQF level on the certification produced by 2012. The general workings of the implementation occur within a rule-bound context through an institutionalised methodology. However in practice the application is at times resulting in a personalised approach, particularly in defining learning outcomes. This problem is caused by the flexibility of the system and can be solved through flexibility operating within quality assured systems. There is clear policy transfer in this process, as countries are evidently adopting the successful implementation of other countries into their systems. Countries are attempting to adopt elements of the Maltese referencing report for example, in building NQFs in eight levels (as inspired by the EQF), and by trying to reference both the EQF and QF/EHEA interchangeably.

The EQF implementation process is a multi-strand policy process. It is not just about tying level descriptors across Europe. The process implies the building of credit systems in both generic and academic streams, supports the validation of informal and non-formal learning, and encourages parity of esteem between education streams. The learning outcomes approach is not used solely for the setting of levels, but it is being applied to employment by evolving into occupational standards, which in turn encourages sectoral co-operation.

Images of the state

The EU is acting as a supra-national state in co-ordinating the implementation of many policy areas such as the EQF initiatives. Taking Malta as an example, the state is shifting from the patron provider state to a competitive state which sacrifices elements of the patron in order to retain competitiveness. In implementing the EQF, the state may be acting as agent of the European tools, but in the context of Malta certainly with the self-interested goal to turn Malta more into the *entrepot* model described by Warrington & Milne (2007, 411-413) as the flourishing island state with economic strength yet vulnerable due to its geopolitical profile.

Conclusions

The implementation of such processes is an on-going task defined by developments. Referencing national systems to the EQF is described as a snapshot in time (EQF Note 3, 39) which needs to be revised to reflect advances as relevant. The referencing of the MQF to the EQF resulted in a positive experience which bolsters the Maltese education system in a general way and further elaborates its role in employability and lifelong learning. The decision-making and policy process in this policy field serve as experiences that illustrate observations of this European tool within the European and national context, some of which have been tackled in this paper. It is clear that the development of the EQF and its implementation on the national level has provided boundless opportunities for further co-operation and success in this sector of policy and related policy spheres. It further unites the European labour market through harmonisation of systems whilst distinctly maintaining uniqueness away from hegemonisation.

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QUALITY, QUALITY ASSURANCE, STANDARDISATION AND ENHANCEMENT. THE VIEW FROM THE SPANISH HIGHER EDUCATION EXPERIENCE

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Abstract – *Almost since external quality assurance (EQA) systems began to be implemented in higher education, there has been a harsh debate about their actual efectiveness in improving the quality of higher education programmes. In Spain, despite some delay in the implementation of EQA, similar concerns to those already reported about other European higher education systems are observed. One important conclusion is that proper alignment between monitoring and accountability (external) and enhancement (internal) processes is a key factor to succeed in higher education quality policies. Spanish experience suggests that much greater responsibility on the part of internal actors is required for actual improvement. The fundamentally different nature of assurance and enhancement processes is analyzed here to draw some conclusions and make some proposals based on recognition of the specifity and complexity of educational processes.*

Key words: *quality assurance; quality enhancement; internal and external quality processes*

Introduction

"What is the relation of quality assurance to quality in higher education?" (Harvey & Newton 2007, pg. 225). It is obvious that the investment required to implement external quality assurance (EQA) structures and processes makes sense only if it contributes to improving quality. However, in the specific case of higher education, this relation is not so obvious. Almost since these systems began to be implemented, they have been harshly criticised with regard to the balance between the high cost in terms of the time and effort required and their real usefulness with respect to effective improvement of degree programmes. (Harvey, 2005; Hodgson, 2010). The 2005 report from the European University Association (EUA) acknowledged that, in countries where these processes are most implemented and institutionalised, EQA "tends to be seen as more of a bureaucratic burden of limited use for institutional development" (Reichert & Tauch, 2005, p. 31). In 2010, Kath Hodgson summarised the problem as follows: "Since the introduction of the national and European quality frameworks referred to above, and external interest in institutions' quality assurance, much of what has been written by the academic community has been critical. From the beginning, it was seen by many academics as bureaucracy devised by quality officers involving the collection of data and general checking largely for its own sake. The introduction of many quality assurance procedures was seen as taking up valuable time that would be better spent on work with students or in doing research" (2010, pg. 56). The problem with EQA has always been the poor value it is seen to have within higher education institutions. From the internal academic perspective, specifically within the Spanish university system, EQA is rarely perceived as valuable, as being capable of solving problems and promoting quality improvement in the teaching-learning process. It is nearly always seen as something independent and detached from everyday academic processes. This perception is widespread – albeit with important differences and nuances – across all European higher education systems.

Since 1990, authors such as Vroeijenstijn, with expressive titles like *Control oriented versus improvement oriented quality assessment* (1990), *External Quality Assessment: Servant of Two Masters?* (1992) and *Improvement and Accountability, Navigating Between Scylla and Charybdis* (1995), have framed this issue in terms of the difficult co-existence between external quality assurance, focused on external accountability, and internal quality management systems aimed at improving processes. The European Network for Quality Assurance in Higher Education (ENQA), in one of its foundational documents, denies this difficulty, and in its basic principles states emphatically that "quality assurance for accountability purposes is fully compatible with

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quality assurance for enhancement purposes" (2005, pg. 13). This categorical statement is based on the conviction that it is possible to align external assurance systems with internal quality improvement systems, in a way that is complementary and constitutes a valuable tool for improving higher education. Nevertheless, the combination of accountability and quality improvement in a single process could therefore never be easy (Westerheijden, 2007, pg. 82). The most critical of authors also doubt that the quality assurance systems established are capable of monitoring the real quality of degree programmes (Harvey & Newton 2007), and ask "Is it time to replace quality assurance with quality improvement (or enhancement)?" (Harvey & Newton 2007, pg. 225).

Although one should not underestimate the part of the criticism that may be due to the reaction by some academics to greater control of their activities in an environment accustomed to self-regulation (Dills & Beerkens, 2010), the fact is that the effectiveness of external quality assurance in improving the quality of higher education programmes is, to say the least, debatable. Although the introduction of EQA into the Spanish system has, as in other university systems (e.g. Frederiks, Westerheijden & Weusthof, 1994), drawn attention to quality and led to the establishment of some valuable internal processes, this positive effect soon came to a standstill when it was demonstrated that external quality assurance systems were incapable of evaluating qualities and having an impact on the processes that really make a difference to the quality of academic activity. These are highly complex and qualitative processes, difficult to reduce to indicators and standards, and their innovation and improvement can only be achieved through total involvement and the allowance of a certain degree of autonomy.

Without doubt, a correct alignment between monitoring, evaluation, and accountability processes (internal and external) and innovation and improvement processes (internal) is the key to success in all higher education quality policies. Without this alignment, quality assurance may be reduced to, as stated by Mantz Yorke, a problem of "how to play the game", and Spanish universities, like many European universities, respond by establishing specialised units, experts in interpreting the implicit and explicit agenda of the evaluators and in preparing "for whatever form of external quality scrutiny is about to be visited on them" (Yorke, 2000, pgs. 22-23). Converted into a game, quality assurance is separated from academic processes and becomes an imposed bureaucratic burden, as indicated in the aforementioned ENQA report, with no internal value or effect. In other words, the creation of a true quality culture in higher education depends largely on achieving the proper alignment of internal and external processes.

The design of a harmonic complementarity between internal and external processes involves the analysis of the objectives and concepts of quality posited by each party. There is no single objective, as it would seem from the optimistic assertion of the ENQA. In fact, the question of the quality of higher education is overlapped by very different conceptions of the quality to be achieved, depending on the particular objectives of those involved (e.g., de Miguel et al, 1994; Barnett, 1992; Tam, 2001; Rodríguez Espinar, 2001; Harvey and Green, 1993). Each conception establishes diverse lines of action, criteria, and tools that consume resources and tend to impose their own "vision" of quality as though it were the only one possible. The achievement of correct alignment requires this complexity to be recognised, not denied. Below we propose a framework in which to analyse this complexity, in order to establish and identify the constraints and challenges of each perspective, to define the logic of the processes, criteria and instruments that they give rise to, and to determine the commonalities, differences, and boundaries between them. Convinced of the need for both perspectives, we pursue the harmonious coexistence and mutual reinforcement – in specific points – of two very different processes.

The Fundamentally Different Nature of Assurance and Enhancement Processes through Their Respective Benchmarks

The concept of quality assurance in higher education has been used extensively to refer to any quality-related process. However, it would be more appropriate to use the term quality management in this general sense, and to restrict the use of quality assurance to specific types of quality processes that give assurance to third parties, confidence, and security in complying with criteria or thresholds defined as the minimum acceptable level of quality. The concept of assurance is thus linked to the idea of "the minimum below which is not acceptable" and entails some form of more or less public declaration or opinion. The concept of standards, intrinsically linked to all quality assurance processes, largely shares this idea of "mandatory minimums" (and, moreover, the idea of standardisation or normalisation with respect to general validity criteria).

The processes and programmes implemented by external agencies and higher education institutions respond greatly to this concept of assurance, as a guarantee of compliance with a minimum standard: assurance of information provided by universities regarding the objectives, plans, processes and outcomes of their programmes; assurance of the existence of consultation mechanisms for assessing the satisfaction levels of those involved; assurance of the existence of rapid response procedures to deal with complaints or the detection of unsatisfactory practices; assurance of the existence of levels of learning outcomes required for achieving certain university degree programmes, etc. The main objective of quality assurance, thus

understood, is to provide assurance to third parties (students, administrations, other universities, and other university systems) and inevitably requires the existence of sufficiently specific and well-defined criteria against which a reliable evaluation can be made regarding compliance with the established requirement. Reliability is the key issue of such evaluations, given their public nature and potentially serious consequences.

In contrast to the idea of quality assurance, based on the establishment of minimums or critical lines under which that opinion is not acceptable, the concept of enhancement takes as a reference an ideal model of quality to which to aspire. This horizon, an unattainable ceiling which one constantly strives to reach, does not need – and nor can it have on many occasions – the level of determination required by a threshold, compulsory compliance with which must be publicly demonstrated. For this reason, the ideal model that serves as a reference can be much more complex, contextual, rich, and abstract. In fact, most of the main objectives of learning processes, higher education systems, and the companies that promote them, could not be formulated in terms of specific and exact thresholds, precisely because they are too complex, involve a huge number of factors, and have a strong historical and contextual dimension. It is possible to establish milestones or accurate results (learning outcomes, for example) that are considered to be related to advancement towards these goals, but these are merely indicators and observable aspects that point to achievements towards that ideal quality model. The reference model, as a threshold that can never be fully reached, marks out the path for continuous progress, something very different to a specific line, the reaching of which can be reliably proven.

In this respect, it is difficult to *guarantee* the quality of learning processes. *Assurance* can be provided for peripheral aspects of the process (the use of specific facilities, scheduling of certain types of activities, etc.), but one can not provide *assurance* for specific quality in the interaction between teachers and students, a certain intensity or quality in the collaboration between the students themselves, or a certain level of orientation towards in-depth learning of activities and their evaluation, to name but a few aspects that the research has shown to be fundamental in the quality of learning processes (e.g., Astin, 1993; Pascarella & Terenzini, 1991, 2005; Kuh, 2005; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006). Most of the fundamental qualities that characterise the teaching and learning quality processes considered can not be *assured*, as they are too complex and contextual. *Assurance* can be provided when proper procedures and outcomes can be accurately determined. In other words, compliance with a certain level of quality cannot be *guaranteed* from outside the universities, as this would require it to be defined in the form of criteria or precise thresholds with general validity, which is virtually impossible, apart from the formal, superficial and, in many cases, irrelevant aspects. This is the origin of the internal perception of *quality assurance* as mere bureaucracy.

In the *enhancement* process, actions or situations can, and should of course, be evaluated against a reference model. This entails complex forms of evaluation which are almost always linked to expert opinion based on a complex and contextual reference model in which subjective aspects will necessarily be introduced. In short, peer opinion, a traditional process in the academic world and the object of strong suspicion on the part of external quality technicians. As noted by Westerheijden, "this purely educational perspective requires qualitative assessment procedures, necessarily conducted by peers and experts, which is far removed from precision and "intersubjectivity" and reduces the comparability of performance indicators." (2007, pg. 82). However, perhaps just as academics have to get used to the necessary external accountability, external experts and technicians should understand the specificity, complexity and contextual nature of teaching and learning processes, which are not easily assimilated with those in the productive and service sectors from where the traditional quality assurance theories and practices originate. Education is not a *service* in the traditional sense, nor is the student a *client*, based on the fact that the basic *inputs* are the very qualities of the *client*, that he himself is the key player in the *process*, and that the *ouput* is the *client* transformed as a result of his work. The outcomes of a learning process are often cognitive abilities and complex psychological qualities that are much more difficult to measure than the majority of products and services in which the concept of quality assurance was formed.

From the point of view of academic experience, it is evident that the concept of *assurance* does not fit with the more internal and fundamental part of educational processes. The processes involved tend to be seen as superficial, purely a formality, incapable of realising what is really important. Many authors have expressed opinions in this regard. Lee Harvey, for example, stated that quality assurance systems "were never designed to ask fundamental questions." (2005, p. 271). Westerheijden (2007) also came to the same conclusion, emphasising that many current-day quality assurance systems may perfectly well meet external assurance requirements without dealing with the fundamental issues of quality.

The contrast between the clearly-defined thresholds or standards, with general validity, of the *quality assurance* processes and the ideal, contextual, and complex reference models that characterise the *enhancement* process, clearly illustrates the different logics that inspire each of the processes. One seeks to *assure*, to *guarantee* to third parties minimum criteria or standards, and the other aspires to excellence, through the logic of innovation, creativity, and research. One is about external requirements (and the internal response to these requirements) and the other is purely internal.

One is established by means of mandatory guidelines (imposed, to a greater or lesser extent, by means of prior negotiation), and the other necessarily involves active internal involvement, conviction, responsibility and autonomy, nourished by a favourable and stimulating context.

And here we must make an important clarification. *Quality assurance*, by its very nature, is centred on the external institution which establishes the rules and forms the opinion, while *enhancement* is inevitably internally-focused, where the processes take place. This has led to the identification of both concepts, with administrations and external agencies on one side, and higher education institutions on the other. However, this is not correct. Assurance can (and should) also be given from within the institutions themselves. What distinguishes the two concepts is not the place where they are managed, but logic. Academic authorities at all levels should provide their own quality assurance systems to guarantee both themselves and those outside the institution certain key aspects, and establish conditions that nourish, foster, and drive innovation and continuous improvement processes.

At this point we must emphasise that the quality of higher education must be structured from within, and this means firstly the teaching and learning processes, and subsequently all aspects of education design, organisation, human and material resources, and an environment that supports these processes. The actors in these processes constitute the internal part and are the key players as regards quality and its improvement. In contrast, the main actors in quality assurance are external, i.e. academic authorities or units in the higher education institutions themselves or external agents and education authorities. These players are not responsible for quality, but for monitoring it, for demanding minimum criteria or requirements, and the harmonisation of the system as a whole through the application of these general criteria, which we can consider the external framework of the activity. The two functions are very different and both are important. It is not about prioritising or choosing one or the other, but to adequately differentiate them in order to distinguish and limit the roles, analyse the specific points of interaction, and design strategies and appropriate tools for each case. Although the difference may seem obvious, it is not so much so in the practice of quality systems, at least in the Spanish case, where *quality* has often been confused with *quality assurance*, and it was thought that those involved with quality were the ones who managed the quality assurance systems, or that the mere presence of *quality assurance systems or* compliance with their requirements, was in itself a guarantee of good quality. Quality higher education cannot be achieved without the active involvement and conviction of the people responsible for the internal processes. Nor is it possible to maintain a higher education system without having some general requirements and criteria capable of offering security and guarantees to students, to the rest of the higher education system, and to the society that finances and maintains the institutions.

Assurance and *enhancement* processes

The aim of *external quality assurance* is to formulate an opinion or external public evaluation on compliance with certain criteria and requirements, with immediate effects and consequences in many cases. The logical internal response is to try to pass the validation test, to demonstrate compliance with established conditions, even when this implies playing a little to emphasise the more positive aspects and making sure that the negative aspects go unnoticed.

This logic is very different to that of *enhancement and innovation* processes, given that these specifically require evaluation, particularly critical self-evaluation to detect and highlight problems and areas that require analysis and action. For this critical capacity to be possible, it is necessary to create secure and formative environments in which the evaluation results do not result in direct consequences for those involved, apart from the establishment of change and improvement processes. Therefore, *enhancement* processes are, by their very nature, internal, and even private at times.

Assurance processes, strictly speaking, culminate with the evaluation and publication of the results (which involves more or less immediate effects). Supposedly, the results of this external evaluation give rise to internal reinforcement or correction and improvement processes. In any case, these supposed reactive processes would be not form part of the assurance process. The evaluation is not in itself designed to feed these processes, as it hardly offers any information of value to them. In the logic of assurance, the supposed reactive effect relies on the publication of the results or the consequences of a sanction or reinforcement. It is, therefore, a process that is not without a certain tension, where the transparency and explicitness of the judging criteria and the reliability of the evaluation process are key factors in reducing uncertainty and achieving recognition and positive assessment from within.

By contrast, in improvement processes evaluation is conceived not as an aim in itself, but as an instrument for action and for making decisions. Consequently, the wealth of information it provides is its principal value. It is usual, therefore, to use informal sources and there is an abundance of in-depth qualitative evaluation systems available, although these are neither reliable nor precise. In other words, a large part of improvement evaluation is about hypotheses, without the time or resources necessary to conduct evaluative research. In any case, the most important thing is to build a robust and consensual diagnosis system, enabling the design of the most appropriate improvement actions.

The experience of quality assurance enables us to conclude some key points that should looked at

carefully in order to facilitate the correct alignment of internal and external processes:

a) The external demand for information for evaluation means extra internal work, which is both distracting and inconvenient. This work is unrelated to the actual quality of the internal activity (the viewpoint of academics in this respect is reflected in the aforementioned studies by the EVA in 2005). That is, it is work that does not meet internal objectives, but those of external bodies. This gives rise to the need for maximum economy in these processes if progress towards an effective alignment of the internal and external position is to be made. In this respect, it is important that, if possible, external assurance is provided on the internal quality management tools.

b) The need for awareness and consistency regarding the limitations of external quality monitoring in perceiving the real quality of the teaching activities, especially when performed on a large number of degree programmes and institutions, and where no rich, qualitative tools are available for the evaluation. This is an important aspect, owing to the devastating effect on internal processes caused by the appearance of assessments or public rankings performed using indicators with dubious validity. When these deficient evaluations are linked to aspects which are important for the institution, such as the approval of degree programmes, funding, and reputation, the result is that the institution will focus their work on these indicators, irrespective of their contextual interpretation, any internal strategy, or even any consistent quality criteria. In Spain, the most notable case of this was with regard to proposals to link the evaluation (and even funding) of degree programmes to student performance and success rates. This, taking into account the different enrolment situations and, above all, the lack of any policy of monitoring the standards required for subsequent career opportunities, is an extremely dangerous and a real temptation for some institutions, which could use their high academic success rates as their main selling point. As stated by Barnett in 1994, "performance indicators are highly limited in their informational content and have nothing to tell us about the quality of the educational process". To perform evaluations and to take decisions based solely on this type of information, lacking validity, leads to the discredit and distrust of *quality assurance*.

Sometimes the prevalent opinion seems to be that any kind of evaluation is better than none at all. However, this is strictly untrue. External evaluation conducted with inadequate tools can be truly disastrous from the point of view of internal processes linked to real quality, as it validates work that has not been carried out well, and punishes those who actually do carry out valuable work, although it is not very visible from the outside. In the Spanish case, the findings from the evaluation of the design of degree programmes which would lead to their verification and approval from 2007 were, especially in the early stages, disconcerting and far removed from the real quality of the designs. This resulted in discrediting those internally who, in conflict with the more traditional internal cultures, had worked hard to achieve up to date quality designs (in accordance with the criteria previously established by the evaluating agency!).

c) The need to move forward in a decisive manner with the definition, transparency, and reliability of assurance processes. Deficiencies in these aspects, in addition to creating strong internal uncertainty, also contribute decisively to the perception of quality assurance as a mere exercise of power by authorities or agencies over the higher education institutions. To paraphrase Ronald Barnett (1992), there is little to gain from quality systems if what is meant by the term has not been clarified. Without making it clear which quality objectives are being pursued through external assurance processes, its function will not be understood internally and there will therefore not be any involvement. Furthermore, transparency, explicitness, and determination of the criteria to be used in external evaluation are prerequisites for alignment between the system's various parts. If evaluations are not foreseeable, the potential impact that external evaluation may have on the improvement of certain internal aspects is practically negated. Lastly, given the potential effects and consequences of the public opinions expressed, a lack of care in the reliability of the same is unacceptable. And this must be linked to, firstly, the previous point: quality assurance systems can not perform evaluations of aspects where no adequate valid information sources are available. Neither should qualitative criteria be introduced if no guarantee is provided as to the competence of the evaluators to interpret them and apply them. In general, those responsible for *quality assurance* systems should be extremely cautious when selecting areas for evaluation, and should limit themselves to aspects that are important from the point of view of guarantees necessary for those involved and the harmonisation of the system, as well as those points which can be evaluated competently, using adequate and valid sources. Even minor errors in the transparency of the objectives and criteria and in the reliability of the evaluation

process, have at times contributed, and more than any other factor, to the internal disapproval and discredit of external assurance.

Innovation and improvement processes also have their own key factors, although they differ from those of assurance:

a) *Institutional leadership and commitment.* "The most important condition for institutional creativity – one that was underlined repeatedly during the project – is the attitude of the institutional management and leadership. Without the commitment of the leadership, isolated or individual initiatives to create or enhance institutional creativity do not succeed." (p. 11). This is one of the principal conclusions of the project launched in 2007 by the European University Association with the aim of analysing the factors that contribute to the establishment of creative and innovative institutions. The practical experience of educational innovation and improvement in some Spanish universities confirms this conclusion (Paricio, 2008 and 2011). Educational innovation processes have, in general, little importance or reach if they do not have, at some point, clear institutional support and a push for widespread introduction. In the case of isolated projects carried out personally by groups of teachers, experience tells of high levels of project abandonment following very specific and minor achievements and a high likelihood of exhaustion and frustration among the most innovative persons involved in the process. This has little to do with creating organisations focused on innovation and continuous improvement based on the quality of degree programmes.

Institutional determination must be reflected in the discourse of its top-level authorities, the institutional and individual importance of evaluating teaching activity and degree programmes, the visibility and recognition of achievements in educational innovation and improvement, in fostering a culture that is oriented towards student learning, maintaining teacher-training structures and programmes, and support for innovation. Particularly important in the case of Spanish universities is a university structure divided into centres (in charge of degree programmes) and departments (in charge of teaching) where responsibility for the quality of the programmes is diluted among a mosaic of subjects for which nobody has overall responsibility. Therefore, it is important to clearly establish responsibility within the university structure by aligning academic management and accountability, and the organisation of effective leadership of degree programmes with the ability to drive continuous improvement evaluation processes.

b) *Involvement and autonomy*. The aforementioned report from the EUA (2007) also warned of an important issue: "Leadership alone, however, does not guarantee institutional creativity. It can create preconditions for such a development, but in the end it is the community – academic and administrative staff as well as students – of a higher education institution that needs to be both willing and able to take advantage of the opportunities offered to exercise their creativity. Like quality culture, creativity needs a bottom-up as much as a top-down approach in order to be (and stay) vibrant" (p.12). At all meetings and conferences in Spain related to innovation in university education, the teaching faculty call for greater economic and professional recognition of achievements in educational innovation and improvement. Extrinsic motivation is certainly important. However, my own experience in supporting and managing educational innovation processes suggests to me that the motivation to innovate is basically intrinsic and stems from a personal commitment to a programme and its students. Personal involvement and, in short, the initiative to innovate, is linked to a sense of ownership and responsibility for a project considered to be one's own. Autonomy, responsibility, and orientation towards innovation and improvement are inextricably linked. Therefore it is essential, first of all, that the necessary institutional coordination actions are sufficiently inclusive for the teaching teams to feel that the programmes they are involved in are their own. Secondly, it is necessary to establish quality assurance processes – either external or within the universities themselves– in a place as unobtrusive as possible, so that the responsibility for quality lies with those who really contribute to it.

c) *Quality models for education processes, up to date and reflected in institutional policies.* From the point of view of improvement and innovation, another key challenge is to build a rich and shared vision on what is important in respect to the quality of degree programmes. It is essential to provide, and to negotiate internally, updated models based on research into factors that contribute to the quality of a student's experience on a study programme, and to make these factors the focal point of the quality management system. This means implementing these models as criteria and procedures for evaluating degree programmes and teaching activity, and as institutional programmes for encouraging innovation. Furthermore, these models must be internalised by the teaching faculty and by academic leaders as benchmarks against which to compare the current situation and create a space

for innovation and improvement. Without a solid and ambitious benchmark for quality, it will not be seen that there is room for improvement and a need to implement innovation processes.

Proposals Which May Facilitate the Alignment between Assurance and Improvement

The widespread academic perception of quality assurance as a bureaucratic burden with very little relation to real quality, is a major problem for the implementation of a favourable culture and effective quality management in higher education. The identification of quality with external quality assurance systems dilutes the real objectives and by meeting external requirements institutions feel that they are doing their work. The result is an absence of strong institutional policies towards internal strategic quality objectives. In short, quality assurance has falsely occupied the place of internal strategic quality management and this, as stated by Lee Harvey in the British case (2005), has deprived internal actors of a sense of ownership and responsibility for the process of continuous quality improvement (p. 272). The reasons for this can be found in the imbalance and misalignment between the functions of quality assurance and improvement, with an excessive conception of the role of external agencies, units, and guidelines, and the lack of effective policies for involving internal actors in improvement processes. Moreover, the lack of determination and transparency in the functions and criteria of external quality assurance has led to a significant degree of discredit and devaluation, and has resulted in errors in internal change and improvement processes. It is essential to find solutions to rebalance the policies of quality assurance and improvement, and to restore internal responsibility and commitment to quality. Based on the experience of institutional quality management and improvement, there are some key issues to be considered in the pursuit of this rebalance:

- Differentiation between external quality assurance processes, such as monitoring and evaluation (external) and accountability (external), and internal quality enhancement processes. Both types of processes form part of quality management in higher education (in the university system or in individual institutions).
- Awareness that the presence of structures and external quality assurance processes is not synonymous with quality, and that these are not the key factors for quality in higher education. Awareness that accountability, the provision of guarantees, and cooperation with the regulation and harmonisation of the system are inherent obligations of university activity.
- A precise definition of the objectives and criteria for external quality assurance, limiting it to the basic functions of a) providing the necessary guarantees to those directly involved in higher education (students, administrations, and others); b) regulating the university system by establishing mandatory standards for processes and outcomes; c) harmonising the system, providing frameworks, benchmarks, and procedures that allow for comparability and mutual recognition. All objectives and programmes that are incorporated into external quality assurance should be debated and, if possible, agreed with the whole system. Process transparency and reliability should be indispensable criteria in every evaluation process.
- Refusal to import uncritical quality assurance systems from other industry sectors or services in the field of education. The complexity of the processes, the difficulty of providing a precise definition of objectives and outcomes, the radical importance of context, the need for intense personal involvement by all parties in order to obtain good results, the importance of personal beliefs and attitudes etc., are just a few good reasons to believe that quality assurance, and quality management in education have their own inherent characteristics that must be respected. In any case, the quality of higher education is, primarily, an academic issue and only incidentally a matter of technical quality units.
- Awareness of the difficulties inherent in processes of change and innovation in teaching design and practices. Changes in educational processes involve major transformation that affects personal beliefs about the nature of knowledge, the meaning of learning a subject, the role of teachers, and the objectives of a university degree. These changes can not occur quickly or by decree. They require highly important internal background work.
- Taking into account, with respect to any quality assurance or improvement programme, the complexity of the educational process as well as the difficulty in defining and evaluating its results. Evaluation using indicators or other simplistic procedures simply leads to confusion and loss of the horizon of the changes being sought. Trying to achieve improvement through the simple application of methodological formulas or technologies only produces innovation mirages which have no effect on the actual quality of the experience and learning outcomes of degree programmes.

Conclusions

Experience to date suggests that the external quality assurance policies, in themselves, are not able to induce the transformation of higher education institutions

which demand change. The imposition of requirements and procedures, perceived internally as bureaucracy with little real effect on quality, or as external exercises of power and control, is unlikely to improve the quality of university degrees. In practice, this policy has led to dissociation between the external processes (led by specialised quality units) and internal academic processes. However, as noted over the past 90 years, this dissociation between an externally-imposed accountability system and a continuous improvement system designed and driven from within, need not be inevitable (Thune 1997; Trow and Clark 1994). The question is: *how is it possible to make both objectives compatible and complementary?*

The simple collecting of objectives, benchmarks, challenges, and key aspects of quality assurance and enhancement, highlights the different nature of both processes. It stresses the excessive simplicity of the assertion that the internal pressure exerted by the requirements of quality assurance processes resulted in enhancement. In fact, the experience was responsible for denying the assumed straightforward sequencing of both processes, showing that certain forms of quality assurance lead to simple tactical responses, which bear little or no relation to institutional strategies and real transformation processes. Hence the academics' perception of superficiality and mere bureaucracy. The proper alignment of internal quality improvement processes and external accountability and evaluation processes require: recognition of their essentially different nature and objectives; a more limited and precise definition of the functions and criteria of external assurance; recognition of the specificity and complexity of the issue of quality in educational processes; awareness of the difficulties inherent in the processes of change and innovation in this area; and much greater responsibility on the part of internal actors with regard to the challenges of quality.

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TOWARDS A MODEL OF DESCRIPTIVE SKILLS RELATED TO A UNIVERSITY DEGREE

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Abstract – *This paper focuses on the accreditation of prior experiential learning and the accompanying platform project which is being implemented in the Parisian region. In the first half of the paper we will focus on the description of the project. In the second half we will discuss the content of the curriculum which represents the basis of this platform and summarizes the «Learning Outcomes» of skill-based education. The content sheet contains all the relevant elements for the RNCP sheet, the Diploma Supplement and the marketing programme of a training offer.*

Key words: *qualifications; APEL; legibility of skills; employability*

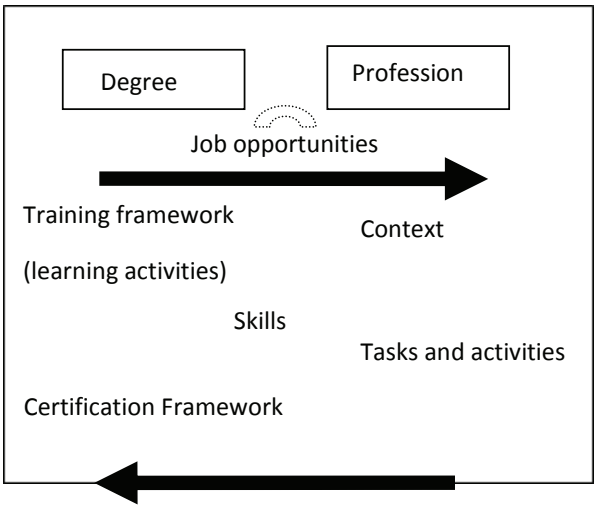
Introduction

The lack of legibility of training offered by the university system is a major issue nowadays, and is often the cause of the lack of appeal and low recognition of university degrees. Be it in continuing education, or the recognition of qualifications, or support for vocational paths, or individual strategies, or career and skills management, or anticipation of developments in trades and qualifications, the disciplinary content does not provide any comprehensive or operational objectives. S*kill legibility* is necessary and expected in order to improve all aspects of the education-employment relationship.

Since 2002, academics have played a major role in the creation of curricula, focusing on the concept of «skills». Thus, a set of recommendations has been formulated at European and national levels which include the following:

- ↳transition to the LMD system (Bachelor's, Master, Doctorate), French implementation of the decision of the Bologna Process;
- ↳mandatory injunction to state the objectives of the training in terms of skills and register the degree to the National Directory of Vocational Degrees (Répertoire National des Certifications Professionnelles (RNCP);
- ↳the obligation to issue the Diploma Supplement, which specifies the certified skills achieved;
- ↳successive plans to reform the Bachelor's degree curriculum («nouvelle license»);
- ↳the possibility of obtaining a degree through accreditation of prior experiential learning, by exercising the skills acquired outside academia.

The legibility of certifications, which will provide recognition of the acquired academic and vocational skills, is designed to provide student and employee mobility, and to improve the relationship between higher education and the socio-economic world. This will lead to graduates' employability, continuing education, and accreditation of prior experiential learning (APEL).



2. A Platform for the Development Of APEL

In order to develop accreditation of prior experiential learning in higher education, PRES UniverSud Paris launched, in 2008, an APEL platform project UniverSud

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Paris[1] to provide procedures and tools available online to assist in the following two processes:

- ✓ *accompany the APEL candidate* in the different steps, namely to inform, position, build his/her case and prepare his/her presentation before the Board;
- ✓ *facilitate administrative process* throughout the approach and afterwards, monitor the activity.

The expert software modules follow the major stages of the process of accreditation of prior experiential learning in six stages as follows:

1. *General information* on accreditation of prior experiential learning (rules, funding...) and available higher education degrees;
2. *Orientation and prepositioning*: the "*prepositioning*" tool, based on the academic records described in the second part of this paper, to assist the candidate in the identification of the diploma and guide him/her throughout the compiling of his/her professional and personal experience file.
3. *Application admission and accompanying contractual arrangements*.
4. *Candidate support:* a set of tools and online resources to assist the candidate in *the transcription* of professional tasks in agreement with the Directory and the targeted diploma level, and in *the drafting* of the record that he/she will present to the jury. This support, based on *collaborative work* with academic records, allows for a gradual achievement of *demonstration elements* necessary for the APEL jury. It may also participate in the process of self-directed learning of APEL trainers.
5. *Administrative tracking tool.* This module allows administrative and financial cross-monitoring of the conduct of the APEL approach. It also facilitates follow-up (various statistics, links between exercised profession and degree, gap between initial training and targeted degree…).
6. *APEL Database.* This database allows for the exploitation of the information contained in records and assists in the creation of application files (different pieces of evidence for the jury, examples...).

The developed platform borrows some of the elements of the Validexper[2] platform, which was initially conceived for administrative tracking. The universities of Créteil and PRES UniverSud Paris have upgraded and improved it to suit their needs.

The new platform resulting from this work retains the generic name of Validexper [1] and may be used by partner universities (for example Validexper UniverSud Paris) Today, the project brings together eight universities from the Parisian region (Paris Nord, Paris Est Créteil and Marne la Vallée, Paris 8, Evry, Cergy, Paris Sud, Versailles) and Nice. Current work is co-funded by the County Council of Ile de France and the PRES UniverSud Paris.

The Conception of a Skill-Oriented Curriculum

The conception of mutual legibility between education and employment is an issue which many scholars have already pondered upon, both at European and national levels. The conception of this particular curriculum is based on several of these findings.

We therefore reviewed several works and approaches regarding the formalization of education results at European level. Thus, during the Bologna Process, and in a context of comparability of educational qualifications, education outcomes were placed at the core of the debate. Belonging to a specific level (Bachelor or Master), they are described in terms of European requirements using the Dublin Descriptors[3], and they should provide a means of demonstrating and comparing achievements.

The findings of the TUNING project (3) bring about another objective. The aim of this project was to provide innovative tools based on the description of courses, student workload, knowledge and skills acquired at course completion (Bachelor and Master). The project team analyzed nine fields of education (business administration, education, geology, history, mathematics, physics and chemistry) in order to define general and specific skills, and to show, by means of surveys and interviews, their respective importance for employers and academics.

Finally, we may rely on the three descriptors – knowledge, abilities, skills – of the European framework for professional qualification (EQF, European Qualification Framework). These are used to implement a grid of reference to establish equivalents between the different degrees of European countries within the perspective of mobility and lifelong learning (4).

In France, the establishment by law of the National Commission for Professional Certification under the

[1] Developed by the universities of Paris Sud, Evry, and Versailles

[2] Platform for administrative tracking developed by the University of Créteil

[3] Dublin Descriptors developed by an informal group of the "Joint quality initiative" was confirmed in the consensus of Amsterdam in 2002 and recommended by the convention of the EUA in Graz in 2003. For Bachelor and Master levels see descriptors at: http://ec.europa.eu/education/policies/2010/doc/consultation_eqf_fr.pdf

authority of the Minister in charge of vocational training (law of social modernization of 17 January 2002 n° 2002-73) has helped improve training legibility (4), in particular through the creation of the National Directory of Vocational Degrees and a skill-oriented curriculum. Similarly, by defining what pieces of evidence should be given, and the means through which one could prove the skills acquired through prior experience, the work conducted in the field of accreditation of prior experiential learning helped to explore the connections between formal, non-formal and informal experience and the learning outcomes of a university degree.

Taking into account all previous work and experience gained from the implementation of APEL, the findings of the PRES UniverSud Paris task force for the accommodation of a device for information, guidance and positioning for the APEL candidates, resulted in the creation of a detailed degree description. The plurality of information is necessary due to the diverse target public and the hierarchy of their search criteria.

Presentation Card

For this purpose, a presentation sheet containing the following fields of identification was conceived:

- Title of the diploma
- Code NSF (Areas and Specialty Groups - Nomenclature of Specialties of Training) (5)
- ROME code (Operational Trades and Professions Directory = Répertoire Opérationnel des Métiers et des Emplois) (6)
- Presentation of the academic level (Bachelor's, Master, Doctorate) with reference to the Dublin Descriptors and the European Framework for Professional Certification
- Geographical criteria.

The card takes the overall appearance of the records of the National Directory of Vocational Degrees.

Project Universud Diploma Fact Sheet

Degree and title			
Diploma:			
Title 1: (reference,...)			
Title 2: specialty (option)			
Certification authority			
University name:		University acronym.	
Location service APEL (City):		Location service APEL (Department):	
Training specialties (NSF)			
Training (NSF) specialties (3 maximum)			
NSF codes:	Letter	Labels NSF:	
Available trades for the degree holder			
The closest ROME sheets (3 maximum)			
Codes:	Labels:		
Key words			
Levels of certification			
CNC Level:		CEC Level:	

Learning outcomes

Learning outcomes will be presented in three subsets:

- general skills (all university diplomas),
- general skills specific to the diploma,
- professional activities and skills (in relation to business opportunities of the diploma and data on the development of graduate students).

Cross-curricular skills						
	Activities	Level [a]				
		N	**A**	**M**	**E**	**0**
General diplomas	Organizing and planning personal work					
	Searching for information (on the internet, databases and other documents)					
	Processing the information					
	Putting the information to use					
	Carrying out a study					
	Directing a project (with a team)					
	Proposing innovative ideas to answer to needs and overcome problems (creativity)					
	Solving a problem					
	Using ICT or Using ICT within the framework of a specialised field					
	Spoken French					
	Written French					
	Spoken English					
	Written English					
	Communicating orally and/or by writing in a language other than English					
	Respecting the principles of ethical conduct and professional and/or societal fields					
Specific diplomas 2 maximum not included in general diplomas	Activities in context associated with cross-curricular skills for the diploma, not included in general diplomas	N	A	M	E	0

Professional or disciplinary skills					
	Professional and/or disciplinary activities	**Level [b]**			
		N	A	M	E
Professional and/or disciplinary skills 10-15 maximum	activity 1				
	activity 2				

Instructions for the completion of forms

This form is accompanied by instructions to provide education officials with help when describing the diploma for which they are responsible. This is also intended to create homogeneity between these descriptions.

Instructions for Completing the Universud Diploma Form

Certification levels		
Niveau	CNC : Cadre National des Certifications *(NQF = National Qualifications Framework)*	CEC : Cadre Européen des Certifications *(EQF = European Qualifications Framework)*
L	2	6
M	1	7

The **Cadre Européen des Certifications (CEC) pour l'Enseignement supérieur** *(European Qualifications Framework for Higher Education ; EQF-HE)*, known as the *«**Dublin descriptors**», was designed within the framework of the Bologna Process* as in previous years and corresponds to levels 6, 7 and 8, otherwise known as levels L, M and D of French higher education. This framework defines levels of certification based on the achievements of education and training (Learning Outcomes), expressed in terms of knowledge (*), ability (**) and skills (***).

(*) **Knowledge (theoretical and factual)**

Results of knowledge through education and training; knowledge based on facts, principals, theories and practices related to a field of work or study.

(**) **Abilities**

Ability to apply knowledge to complete tasks and solve problems, EQF cognitive skills (use of logical, intuitive and creative thinking) or practical skills (involving the use of methods, materials, tools and instruments).

(***) **Skills**
Demonstrated ability to perform activities, that is to say, to use knowledge, skills and personal, social or methodological approaches, in situations of work or study and for professional and personal development.
The level of skill needed to perform an activity is evaluated in relation to the level of autonomy and / or responsibility required to carry out the activity (see EQF).

General cross-curricular skills

For each cross-curricular skill (proposed or to be added), **teachers** are required to answer the following question: «At the end the diploma, at what level [NAME] of competence (level of autonomy and / or level of responsibility), are graduates capable of ... [carrying out the activity]?»

Candidates are required to answer the following questions: «Have you been in a position to ... [carry out the activity]» and if the answer is yes: «With what level [NAME] of competence (level autonomy and / or level of responsibility), has it been completed?»

These skills are related to cross-curricular learning, thus with modules related to the use of ICT, languages, the methodology of documentary work, of academic work (including theses methodology, articles, reports and a work experience outlines...).

List and description of cross-curricular activities:
• Organising and planning personal work
- establishing and managing priorities in relation to constraints and risks
- time planning
• Searching for information (on the internet, databases and other documents)
- clarifying the purpose of the research
- identifying the mode of access to sources
• Processing the information
- sorting / analysing the relevance of information
- prioritizing information
- checking the quality of sources
• Putting the information to use
- contextualizing information and putting it in perspective
- producing meaning from raw data
- respecting sources
- restoring orally and in writing
• Carrying out a study
- coming up with an argument
- defining a methodology
- structuring and formalizing the approach
- implementing a plan to respond to the argument
- interpreting and analyzing results
- synthesizing
- criticizing, suggesting improvements and / or extensions
- reproduce orally and in writing
• Directing a project (with a team)
- defining the objectives and context (available resources, constraints, risks,…)
- organising, coordinating and directing work within a group to achieve the required objectives
- evaluating activities (quality management), suggesting improvements and / or extensions
- proposing extensions
- reproduce orally and in writing
• Proposing innovative ideas to answer to needs and overcome problems (creativity)
• Solving a problem
- understanding the problem and context as a whole in order to identify and reformulate them
- organising one's reasoning
- proposing solutions adapted to the context (including advantages/disadvantages)
- reproduce orally and in writing
• Using ICT
C2i level 1 *(http://www2.c2i.education.fr/)* or
• Using ICT within the framework of a specialised field
C2i level 2 *(http://www2.c2i.education.fr/)*

• Spoken French
- selecting and organizing ideas logically according to instructions
- preparing adequate communication channels
- speaking in public while respecting the basic rules of expression (syntax, spelling, punctuation)
- arguing and defending a point of view (during the presentation or follow-up questions)
- listening in order to reproduce and analyze
• Written French
- selecting and organizing ideas logically according to instructions
- meeting the constraints of style (review, thesis, notes,...)
- examine style and writing whilst respecting the basic rules of expression (syntax, spelling, punctuation)
• Spoken English
• Written English
- *see* Common European Framework of Reference for Languages
• Communicating orally and/or by writing in a language other than English
- *see* Common European Framework of Reference for Languages
(http://eduscol.education.fr/cid45678/le-cadre-europeen-commun-reference-pour-les-langues.html)
- Level A: basic user (= compulsory), itself divided into breakthrough or beginner level (A1) and way stage or elementary level (A2)
- Level B: independent user (= high school), threshold or intermediate level (B1) and vantage or upper intermediate level (B2). This corresponds to a «limited operational competence» (Wilkins) or «appropriate response in everyday situations» (Trim)
- Level C: experienced user, divided into C1 (effective operational proficiency or advanced) and C2 (mastery or proficiency)
These levels «calibrate» the results of learning foreign languages. Level C2 is not to be confused with the language proficiency of native speakers. It can no longer be the ideal model to assess the language proficiency of students
• Respecting the principles of ethical conduct and professional and/or societal fields
Integrates the following items, at undergraduate degree level, from N to A, and postgraduate level, from N to E:
- Being aware of, understanding and respecting ethical principles
- Updating knowledge in this area
Also incorporates, at postgraduate level, the following items with an expected skills level from N to E:
- Questioning ethics and, if necessary, challenging ethical practices and procedures
- Sharing ideas with other members of the disciplinary field, and / or professional / societal

Level related to each cross-curricular skill:
Each activity is associated with a «skill level» for graduates.
These skill levels are defined by the degree of autonomy and / or level of responsibility required (see Cadre Européen des Certifications or European Qualifications Framework); four levels of competence and a "not applicable" section have been devised:
(N) = Notion/basic knowledge (carrying out work without support)
(A) = Application/application (carrying out work with support)
(M) = Maîtrise/use (carrying out work independently)
(E) = Expertise/expertise (personal contribution to the evolution of work)
(0) = Sans objet/non-applicable (in which case all sections are non-applicable)

Professional and/or disciplinary skills <-> *Activities and levels*

For each cross-curricular skill (proposed or to be added), **teachers** are required to answer the following question: «At the end the diploma, at what level [NAME] of competence (level of autonomy and / or level of responsibility), are graduates capable of ... [carrying out the activity in context]?»

Candidates are required to answer the following questions: «Have you been in a position to ... [carry out the activity in context]» and if the answer is yes: «With what level [NAME] of competence (level autonomy and / or level of responsibility), has it been completed?»

These skills are related to more specialized teaching modules compared with cross-cultural skills teachers, related to jobs and / or areas of activity «covered» by the diploma, or curriculum (professional integration following further education).

Formulation of professional activity:
an action verb characterizing professional activity / implementation of the activity

Skill level associated with each activity (autonomy and / or level of responsibility)
Each activity is associated with a «skill level» which is expected of graduates and required for its completion. These skill levels are defined by the degree of autonomy and / or level of responsibility required (see Cadre Européen des Certifications or European Qualifications Framework); four levels of competence have been devised:
(N) = Notion/basic knowledge (carrying out work without support)
(A) = Application/application (carrying out work with support)
(M) = Maîtrise/use (carrying out work independently)
(E) = Expertise/expertise (personal contribution to the evolution of work)

Conclusions

APEL's approach is essentially based on "learning outcomes" in skills-based training. The instructions described in this article constitute the main information used in all phases of the APEL process:

- Informing and directing candidates;
- Self-positioning, which, by linking skills, levels and course modules, indicates a candidate's level and chances of obtaining a degree with APEL;
- Developing a candidate's APEL form. The candidate must provide evidence of skills;
- Jury members who may consult a candidate's form in order to analyze the candidate's level in relation to the skills evoked in the framework and the level required for graduation (i.e. the level expected by the teacher).

The curriculum form described in this paper proposes levels between training and employment, with a view to facilitating the movement between academia and the business world in professional careers. It is, therefore, important to homogenize communication on degrees: web or paper presentations, diploma supplements, RNCP forms, employability, etc. This model involves the eight French universities who are partners in this project.

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[2] http://ec.europa.eu/dgs/education_culture/publ/pdf/eqf/leaflet_fr.pd

[3] http://www.centre-inffo.fr/Nomenclature-des-specialites-de.html (Nomenclature of course specialities)

[4] ROME[1] : Répertoire Opérationnel des métiers et des emplois.

[1] This database which describes the existing businesses and jobs in France is available free of charge on the Pôle emploi website. This directory deals with 10,000 businesses and jobs spread over 466 forms. Research can be made by job denomination, a professional category amongst the 22 already listed, and by the 5-letter ROME code corresponding to the job being searched for. To this day, ROME is the only comprehensive repository of jobs available to the Public Employment Service. Its originality lies in its strong links with the working world, its operational nature and its inclusion of occupational mobility. ROME also provides information on specific job terms. The third version of ROME, developed in 2007, integrates new areas and developments in trade skills already listed. www2.pole emploi.fr / espacecandidat / romeligne / RliIndex.do

FOCUSING ON LEARNING OUTCOMES IN THE QUALITY MANAGEMENT OF STUDY PROGRAMMES

Mihai KORKA[1]

Abstract – *Mismatches in the graduate labour market, and the dissatisfaction of graduates concerning the content of education received during bachelor or master degree education, raise the issue of the effectiveness and relevance of learning outcomes, and question the quality management of study programmes. This paper discusses good practice identified by two European projects implemented in Romanian universities concerning, on one hand, identification and addressing of mismatches between learning outcomes to needs of the labour market and, on the other hand, the academic management tools to be involved in continuous monitoring of the quality of learning outcomes.*

Key words: *quality management of higher education study programmes; learning outcomes; academic qualification; graduates' insertion; labour market mismatches*

Why Should we Focus on Learning Outcomes When Discussing Quality Management?

There are three concerns which were at the origin of this paper, as follows:

Concern 1: In concerns of legitimacy, quality assurance has become a significant part of the "higher education business", a *pragmatic term* instead of its old *emphatic connotation*. As Michael Daxner put it a few years ago: "Today we no longer argue with *good quality for taxpayer's money* or *best programmes for best talents*. We seek to create *reliable standards* for the planning of individual and collective decisions to choose an institution, a programme, a certain path to degree".[1] We often show competitive advantage arguments in terms of learning outcomes and/or qualifications in the attempt to express better quality of our graduates when compared to those of other universities. We focus on industry partnership, student services and career counselling when we intend to highlight the advantages of studying in our particular university.

Concern 2: Graduate labour market mismatches and graduates' dissatisfaction have dramatically increased, despite the interest and goodwill evident during the last decades at European Union and at Member States level. There are more and more graduates unable to enter the labour market, to keep a job, and/or to move in the market according to their respective education.[2] There are more and more studies devoted to this topic in the last years. A 2010 research project developed under the auspices of the Romanian Authority for Qualifications concerning *"Recent Higher Education Graduates and Their Insertion into the Labour Market"* identified the most frequent labour market mismatches in terms of competences, as well as the main aspects of graduates' dissatisfaction [3].

Concern 3: In many Romanian academic communities, quality assurance and qualifications' frameworks requirements are still perceived as distinctive goals of newer university management connected to all sorts of national agencies with their specific demand of standards and criteria. In fact, quality assurance and qualifications are a focus of university management as two mechanisms in the process of making higher education programmes more efficient **and** more fit for labour market purposes.

Continuing Adjustment of Quality Assurance in Higher Education Management

From a historical perspective, quality assurance of study programmes has been a feature of continuous adjustment in higher education management. Some of us see quality as an intrinsic value of higher education that is achieved by the fame of the teachers. In the early history of university education the teachers' knowledge and their recognition in the larger community were strong references in choosing where to study. In time, the fame of the teaching staff was transferred at institutional level. The distinction among diploma holders is still referring to the university where the graduate has accomplished his/her studies. Today, these

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points of view are still to be considered in a few elite higher education institutions which offer postgraduate programmes that are obviously linked to advanced research programmes.

Even in elite higher education, students have different individual learning performances. To preserve the positive image of the university as provider of competitive knowledge, around 1950 the external assessment of the learning outcomes was introduced. That separation of evaluation from teaching is, in fact, a first step towards modern peer review aiming at increasing visibility and recognition of quality at programme and institution level among peers.

With the democratization of access to higher education, the number of providers increased and diversified to include universities, foundations, corporate institutes for higher education of employees, etc. Their capability to assure quality education was and still is diverse. Under these circumstances, in many countries accreditation agencies were set up in order to regulate the entry in the market - a very special market - as higher education conserves its character as a public good. As is generally known, accreditation criteria focus mainly on human, material and financial input factors, and take less into consideration the organizational competence of the new provider, the expected learning outcomes, or the real, demonstrated educational needs of society. The absolute number, and the percentage of graduates unable to enter the labour market, are clear signs that the existing accreditation criteria do not help universities to fulfil their social function as long as accreditation of new providers remains a business of academia, ignoring the needs and expectations of the stakeholders in the society which are outside the academic community.

The growing competition among new and old providers in the higher education sector led to the design of more sophisticated procedures and tools aiming to make visible, and even popular, the interest and capability of an institution to offer quality education in terms of standards for curriculum design and student evaluation, for syllabus content and recommended alternative learning sources, for student services, etc. Procedures and tools for internal evaluation of study programmes were designed and implemented. Quality management departments were set up at university level in order to give methodological and logistical support for self-evaluation to the departments and faculties, and to disseminate the results of that evaluation among the academic community. Gradually, students were also involved in the design and implementation of evaluation procedures, criteria and standards. All this progress ended in more transparent quality management of teaching and learning within the academic community. For the outside world it had a poor impact on other stakeholders like families of the students or employers as the dialogue of universities with these stakeholders remain marginal.

At country level, and later on at continental level, quality assurance agencies and networks were set up. Their mission is, on one hand, to offer guidelines and assistance in the appropriate implementation of quality assurance policies at programme and institutional level, and, on the other hand, to perform standard external evaluation and to inform interested institution and the public at large about the results of the external assessment. The European Network for Quality Assurance in Higher Education (ENQA) through its members, and in co-operation with the EUA, EURASHE and ESIB, was invited by the Berlin Ministerial Conference of the Bologna Process signatory states (2003) to develop "an agreed set of standards, procedures and guidelines on quality assurance" and to "explore ways of ensuring an adequate peer review system for quality assurance and/or accreditation agencies or bodies". The response to this mandate was presented by ENQA in the Ministerial Conference in Bergen in 2005 in the form of a Report on "*Standards and Guidelines for Quality Assurance in the European Higher Education Area*".[4]

The obvious need to involve students and other stakeholders in the management of quality assurance in universities has been considered for a time now by some higher education institutions and by some of the national agencies or bodies responsible for quality assurance. It is in ENQA's European Standards and Guidelines (ESG) that this need gets a formal presentation, as one of the objectives set by ESG is "to inform and raise the expectations of higher education institutions, students, employers and other stakeholders about the processes and outcomes of higher education."[4] We have to accept that in our universities we witness in the best cases a formal participation of employers and of professional association in the quality assurance process at programme level. The Romanian Agency for Quality Assurance in Higher Education – ARACIS, has recently set up a special committee of employers to be involved in the external evaluation of universities. It is to be expected that the involvement of external stakeholders will increase both in terms of frequency and of impact.

In the mid-1980s the share of unemployed graduates in some European countries raised for the first time the question of whether the content of higher education programmes fits with the needs of the labour market. The increasing share of unemployed graduates was one of the tangible elements that *shook the ivory tower* [5] and launched an era of more visible transformation in the lifestyle of universities. Transformation refers to many aspects of institutional management: from enrolment policies, funding principles and student involvement in university management, to institutional differentiation of mission, opening of academia towards local and global society, and involvement of professional association and employers in curriculum design and learning output assessment.

Quality Management Tools for Higher Education Programmes

Standards and contents of higher education have been among the drivers of the *Bologna Process* [6] from its very start in 1998, and the *Lisbon Agenda* significantly enhanced their role. Today, higher education providers appear to be more aware of the fact that the design and delivery of study programmes have to comply with requirements that would make it easier for graduates to find jobs later in their professional life.

Quality of learning outcomes, qualifications framework, and employability of graduates are currently among the key topics discussed in the European Higher Education Area. Most of the quality assurance agencies around Europe launched a review of their methodology concerning the educational efficiency chapter in the external evaluation process. On their side, universities have started to experience the implementation of new tools in the quality management of the programmes they offer in the context of a stiff competition for students and for complementary resources.

How to Identify and Correct Mismatches Between Learning Outcomes and Labour Market Needs

The 2008-2009 research project *Quality Education for Labour Market* aimed at identification of content shifts between study programmes and labour market expectations, and improvement of the internal and external evaluation methodology of bachelor degree programmes in the context of the three cycles of university studies implemented in the Bologna Process.[1]

In a first stage, the external evaluation methodology of the Romanian Agency for Quality Assurance in Higher Education – ARACIS - was applied in a number of bachelor degree programs in order to reveal strong and weak points of *educational efficiency*. 52 academic staff members were selected to participate in this exercise, part of them being registered as accredited experts in the ARACIS Register. This analysis helped the project team to scrutinize the implementation of criteria, standards and performance indicators recommended by ARACIS in order to check learning outcomes and students' achievements.

In the same period of time, a team of 12 sociologists, and experts in gathering data and researching public opinion, conducted complex research on the expectations and opinions of the main categories of actors in the labour market of highly qualified persons. Both quantitative and qualitative methods were used in order to better understand what employers, professional associations and recruitment agencies were expecting from graduates to show and demonstrate in their attempt to get a job. On the other hand, graduates of the last 4-5 cohorts were also questioned concerning their insertion in the labour market and their personal and professional satisfaction after graduating a bachelor degree programme. In order to make the kinds of outcomes comparable, the researchers applied the same *academic qualifications' descriptors* which are currently implemented by universities in order to establish the National Register of Qualifications in the Romanian Higher Education – RNCIS[2].

The comparative analysis of the research outcomes, revealed the following:

i. On one hand, the existing shift between universities and the labour market actors in understanding learning outcomes
ii. Different terminology
iii. Different focuses in the mix of knowledge, skills and other results of the learning process, lack of interest to promote and make easy understandable study outcomes for businesses etc.
iv. On the other hand, higher education institutions appeared insufficiently prepared to listen to the expectations of employers supposed to hire their graduates
v. There is also too little interest in the systematic revision of learning contents, in upgrading theoretical knowledge, and in complementing knowledge with appropriate skills for the development of aptitudes and attitudes which an active person is applying in the professional and personal life.

The general findings were translated by the experts of the project into lists of *content standards* for each field of the bachelor degree programmes (similar to what show grids 1, 1bis and 2). These lists sum up professional and transversal competences, as well as minimal performance references. These content standards were aimed to complement the ARACIS methodology of evaluating *educational efficiency* and to induce, at university level, a more *job oriented education* of students. The quality management of each study programme has to check if the curriculum covers

[1] The Romanian title of the project reveals that universities should actively revise content and provision of study programmes and/or disciplines in order to better respond to expectations and needs of the labor market: *„Adaptarea activă a educației universitare la cerințele pieței muncii"*. The project has been financed in 2008-2009 by the European Union as part of the Phare 2006 scheme for Romania under the financing line RO2006/018-147.05.01. A consortium of three companies – *„Mott McDonald"* Ltd from United Kingdom, *„Educația 2000+ Consulting"* SRL and the *„Centrul Educația 2000+"* Foundation from Romania have implemented the project.

[2] In Romanian, *Registrul Național al Calificărilor în Învățământul Superior*. The Register Methodology was approved through Order No. 4430/2009 inacted by the Minister of Education, Research and Innovation.

the generic knowledge and skills which define the academic qualification promised to students at their first enrolment in the programme.

The idea of the project was to sum up *at study field level* the professional and personal competences which facilitate quick insertion in the labour market. The project management team appreciated that a programme level design of the content standards would narrow significantly the employment opportunities for bachelor degree graduates. Most of the academic communities in Romania agreed upon a later in-depth specialisation of students in the master degree programmes.

"Quality Education for Labour Market" was a pilot project which aimed to demonstrate that a pro-active involvement of universities and of each member of the academic staff could effectively support regular students and graduates to get a job easily in according with the knowledge and skills they acquire during the years of study. This explains why, besides the content standards for each field of study, academic experts have also developed a *framework curriculum* which fully covers the promised qualification and, at the same time, gives universities the freedom to add their touch of achieved specialisation.

Another way of facing graduate labour market mismatches is to develop *lifelong learning programmes* with a wide range of purposes in terms of competence units and with a flexible training process, tailored to the level of education and the time constrains of each group of graduates coming back to a higher education institution in order to complete their initial education. Learning outcomes have to be clearly stated, aiming at focusing on the value added of each of the lifelong learning programmes.

This way of approaching labour market mismatches through qualitative assessment of old and learning outcomes compared to the labour market expectations stimulates providers, not only to compete with other actors in the higher education sector, but also to permanently adapt their offerings according to the dynamics of the graduate labour market.

The "*Quality Education for Labour Market"* project also checked the viability and durability of the suggested complements of methodology. Round tables were organized in the universities. The lively debates around the findings of the project, as well as around the new instruments meant to identify mismatches and to improve curriculum and quality management in a more inter-connected approach of academic contents to the expectations and needs of the labour market, demonstrates that the new more inclusive quality culture is gaining an increasing number of supporters.

What Tools Are There to Increase the Effectiveness of Quality Management?

To increase educational effectiveness of a study programme means to implement a management information system capable of informing the provider of all the aspects relevant for a sound quality enhancement of the programme, and of its outputs, including graduate profiles with their demonstrable competences. Among the many initiatives of the last few years one has reached national visibility and is on the eve of getting international recognition. This is *"Development of an operational system of qualifications in the Romanian higher education"* – DOCIS[1] – a project which investigated, among other objectives, the problem of quality management tools.

The main goals of the project are upgrading the system of higher education qualifications and making it compatible with European area specific standards, and with labour market needs. Some 370 experts from virtually all the state and private Romanian universities are involved in the different phases of the project.

The basic principles of the project consist in *consultation* and *consensus* of all stakeholders concerning the following main aspects:

a. Articulate higher education qualifications with pre-university qualifications in order to build up a comprehensive national framework of qualifications.
b. Harmonise higher education qualifications with requirements of the labour market, including professional and transversal skills of a graduate seeking for a job according to learning outcomes.
c. Match the quality of study programmes and the requirements of the professional qualifications.
d. Review the curriculum of each study programme based on the changing needs expressed by the representative employers of graduates.

ACPART has implemented a series of tools that are useful for the quality management of study programmes in order to make consultations fruitful and to ease the dialogue between academia, students, employers, recruiters, professional associations, and other stakeholders. These tools include:

1. The higher education qualifications framework matrix (Appendix A);
2. The description of a study programmes by means of professional and transversal competences of a graduate – Grid 1 (Appendix B);

[1] In Romanian DOCIS is the acronim for „Dezvoltarea unui sistem operațional al calificărilor din învățământul superior din România". The project is financed for three years (2009-2011) as POSDRU/2/1/2/S/2 by means of the European Social Fund and co-financed by the Romanian Government. It is implemented by ACPART – the Romanian National Agency for Qualifications in Higher Education and Partnership with the Economic and Social Environment. In 2011, after consecutive organizational re-arrangements, ACPART has become the Romanian Authority for Qualifications empowered to co-ordinate the design of the full National Qualifications Framework (pre-university education, VET, tertiary education, informal and non-formal training).

3. The coverage of competences presented in Grid 1 by content areas of the study programme, disciplines and credit points – Grid 2 (Appendix C);
4. A more detailed syllabus of each discipline which is part of the study programme.

The Matrix of the Higher Education Qualifications Framework provides two perspectives for the analysis of all higher education qualifications, as follows:

Perspective 1: The vertical perspective allows for an analysis of the acquired professional and transversal competences by means of the specific descriptors.

Perspective 2: The horizontal perspective permits observing the progress that might be achieved by continuing the initial bachelor degree education with a masters' degree programme and, eventually with a doctoral degree programme.

The quality management team at study programme level can use this tool to better articulate the programme to other study levels, to define entry requirements, and to show future learning perspectives.

Grid 1 offers a standardised description of a study programme by means of professional and transversal competences of a graduate. It is the main outcome of the consultations among all the providers of the same, or of a similar, study programme, with the active participation of students and representatives of employers, recruiters and professional associations.

The consensus reached at country level is materialised in up to six professional competences and three transversal competences. Each competence is specified with its performance standard that means a tangible learning outcome of the given study programme. Each student which successfully graduates the programme should be able to demonstrate these learning outcomes in a real context of life or work.

The quality management team at study programme level might add a few complementary competences to those agreed at national level. They have at their disposal **Grid 1bis**. The only requirement is to apply the same framework of concepts and definitions as used in Grid 1. As competition among higher education providers is becoming fiercer, a comparative analysis of the content of Grids 1bis could offer valuable ideas concerning the differentiation of the educational offer from what other providers have put on display. On the other hand, Grid 1 eventually accompanied by Grid 1bis is a powerful marketing tool in presenting to all the interested stakeholders the learning outcomes of a study programme in an easily understandable manner. It is easily understandable for employers and recruiters. It is easily understandable for future students and their parents or sponsors, as it is easily understandable for the professional association that was involved in the completion of the grid.

Grid 2 is a support for the identification of the links existing between the learning outcomes in Grid 1 and the content of the curriculum. It has to be stressed that Grid 2 is not limited to an enumeration of disciplines contributing to each professional or transversal competence. Grid 2 goes in a far deeper qualitative analysis as it specifies the content area (curricular field) that develops the respective competence as well as the fraction of the total number of ECTS of a discipline that is devoted to the development of the competence.

Grid 2 is a *basic instrument for the internal quality management of a study programme* as it reveals the weak points of the distribution of student workload (via ECTS) when compared to the entire list of promised professional and transversal competences at graduation. A competence covered by less credit points is a poorly developed competence. There are two alternatives to bring in a correction: to improve the content of some of the disciplines contributing to the development of the respective competence and to increase the number of ECTS, or to give up the poorly developed competence and strengthen the development of other ones. The freedom to correct Grid 1 is however limited, as the three transversal competences cannot be neglected or replaced by professional ones[1].

DOCIS project does not encourage standardisation of the **delivery** of a study programme, but it offers providers a strong tool for comparative analysis of similar programmes.

ARACIS has expressed a keen interest to develop *a set of educational efficiency criteria and of qualitative standards* based on Grid 2 in its upgraded external evaluation methodology.

The detailed syllabus of each discipline replaces the traditional format of presenting the objectives and the chapters of the discipline. The new tool is more student needs centred information. It is an orientation document and facilitates the interaction between each student and his/her teacher or trainer. The discipline responsible and his/her associates have to specify in the beginning of each semester and put on the web-page of the faculty/department the following aspects - besides the traditional issues enumerated in a syllabus:

- Learning outcomes in terms of knowledge, skills and other outcomes (values, attitudes and aptitudes) by using the same concepts and definitions as in Grids 1, 1bis and 2;
- Role of the discipline in the development of one or more professional competences, without neglecting the transversal ones;
- Average workload for achieving each learning outcome;
- Alternative resources for the development of knowledge and skills specific to the discipline;

[1] Recent opinion polls of students, employers and recruiters stress the fact that graduates do not have well enough developed transversal competences.

- Complementary support services offered to learners;
- Complex evaluation of the learning outcomes in terms of knowledge and skills.

For *internal quality management*, the monitoring of the teaching and learning process is directly served by this more detailed syllabus. Peer reviews and student opinion polls benefit also from this management tool as it sets the content, the timing, the work load and the learning outcomes in a logical framework.

The syllabus should be considered as a document that shows the flexibility and adaptability of study programmes, as the content of each discipline can be periodically reviewed in order to offer students the information concerning the latest achievements of research in the field. It is also the best place to adjust contents to the knowledge and skills requested in the labour market. It is at the same time a file documenting the responsibilities assumed by the teaching and training staff concerning the transfer of knowledge, skills and aptitudes towards the learner.

A final remark concerning DOCIS: All the tools developed through the project represent useful instruments for *a more transparent conduct of universities* in their relation to the external stakeholders and *a more inclusive quality culture inside the Romanian universities*.

Conclusions and Recommendations

There is a clear move towards a dialogue between universities and the external stakeholders. To make this dialogue a reference point in the enhancement of quality of study programmes and of learning outcomes the following point should be considered.

- Universities should enlarge the participation of academia and students in the *intra muros* development of the quality culture based on a *pragmatic,* labor market defined learning outcomes.
- Universities have to be more transparent, and better communicate with the extra-academic world, to inform and educate people when it comes to the means and tools used to promote learning outcomes and quality of higher education.
- Universities need to be responsive to the needs and expectations of the ever changing external world.
- Universities need to be pro-active in promoting changes in their own provision of study programmes and invite professional associations, employers and recruiters in the decision making process related to curriculum content and learning outputs.

[1] Michael Daxner (2008): Report of the Grand Temoin on Conference on „Quality Assurance in Higher Education", Strasbourg, 9-10 September, pp. 2 and 3

[2] Mihai Korka (2010): *Graduate labour market mismatches: new features of an older matter*. In „Review of Economic and business studies, volume 3, issues 1, pp.13-22. Also, Gina Cristina Dimian and Mihai Korka (2010): *Comparative analysis of unbalanced labour markets in Romania and in other EU countries*. 5th International Conference on Applied Statistics, Bucharest, 19-20 November

[3] *„Absolvenţi recenţi de învăţământ superior şi integrarea lor pe piaţa muncii"("Recent Higher Education Graduates and Their Insertion into the Labour Market")* has been developed as part of EU founded as a structural reform project in the field of human resources POSDRU/2/1/2/S/2. It is a sociological study based on more than 5.5 thousand validated answers from graduates of the last five academic years and on some 4 thousand validated answers from employers and recruiters of graduates.

[4] ENQA (2005): *Standards and Guidelines for Quality Assurance in the European Higher Education Area*, DG Education and Culture, http://www.enqa.eu/pubs.lasso

[5] Peter Scott (1998): *Shaking the Ivory Tower*. In „UNESCO Courier"

[6] Ján Figel': ***Inaugural Speech*** of the European Commissioner for Education, Training, Culture and Youth at the *UNESCO Forum on Higher Education in the Europe Region: Access, Values, Quality and Competitiveness*. Bucharest, 21-24 May 2009.

			DOCTORATE		
			MASTER'S		
			BACHELOR		
Transversal competences	Personal and professional development competences	**8. Personal and professional development**	Awareness of the need for continuing training; efficient use of learning techniques and resources for personal and professional development	Self-control of the learning process, diagnosis of training needs, reflective analysis on own professional activity	Development of creativity-centred projects as the basis for self-accomplishment
	Role competences	**7. Social interaction**	Familiarisation with the teamwork-specific roles and activities and with task allocation for subordinated levels	Assuming management roles/functions for the activities within professional groups or institutions	Assuming responsibility and capacity to organise and lead the activities of professional groups, scientific research groups or institutions
		6. Autonomy and responsibility	Responsible performance of professional tasks in an autonomous manner, with qualified assistance	Undertaking complex professional tasks under autonomy and professional independence conditions	Innovative initiation and development of complex theoretical and practical projects
Professional competences	Functional-actional dimension	**5. Creativity and innovation**	Development of professional projects by using well-known principles and methods within the field	Development of professional and/or research projects using a wide range of qualitative and quantitative methods in an innovative manner	Design and undertake original research, based on advanced methods leading to the development of scientific and technological knowledge and/or of the research methodologies
		4. Critical and constructive reflection	Adequate use of standard assessment criteria and methods to appraise the quality, merits and limitations of processes, programmes, projects, concepts, methods and theories	Pertinent and appropriate use of assessment criteria and methods to formulate judgements and fundament constructive decisions	Critical-constructive assessment of projects and scientific research results, appraisal of the stage of theoretical and methodological knowledge; identification of knowledge and applicative priorities within the field
		3. Application, transfer and problem solving	Use of basic principles and methods for solving well defined problems/situations that are typical to the field, with qualified assistance	Integrated use of the conceptual and methodological apparatus in incompletely defined situations in order to solve new theoretical and practical problems	Selection and use of advanced principles, theories and methods of knowledge, transfer of methods from one field to another, interdisciplinary approaches to solve new and complex theoretical and practical problems
	Cognitive dimension	**2. Explanation and interpretation**	Use of basic knowledge to explain and interpret various types of concepts, situations, processes, projects etc. that are related to the field	Use of specialised knowledge in order to explain and interpret new situations, in wider contexts associated to the respective field	Use of advanced principles and methods to explain and interpret, from multiple perspectives, new and complex theoretical and practical situations/problems that are specific to the respective field
		1. Knowledge, understanding and use of specific language	Knowledge and understanding of basic concepts, theories and methods within the field and the specialisation area; their adequate use in professional communication	In-depth knowledge of a specialisation area and, within it, of the programme specific theoretical, methodological and practical developments; appropriate use of specific language in communication with different professional environments	Systematic, advanced knowledge of concepts, research methods, controversies and new hypothesis specific to the field; communication with specialists from related fields
Learning outcomes		**Generic descriptors**		**Level descriptors**	

Appendix B

Fundamental Field …… **Study Field** …… **Study Programme** ……

Grid 1 – *Description of study programme/field by means of professional and transversal competences*

Qualification Title …… Qualification Level ……	Possible Occupations

Professional competences * / **Level descriptors of structural elements of professional competences** **	C1	C2	C3	C4	C5	C6
1.	C1.1	C2.1	C3.1	C4.1	C5.1	C6.1
2.	C1.2	C2.2	C3.2	C4.1	C5.2	C6.2
3.	C1.3	C2.3	C3.3	C4.3	C5.3	C6.3
4.	C1.4	C2.4	C3.4	C4.4	C5.4	C6.4
5.	C1.5	C2.5	C3.5	C4.5	C5.5	C6.5
Minimum performance standards for competence assessment:						

Transversal competences level descriptors **	**Transversal competences**	**Minimum performance standards for competence assessment**
6.	CT1	
7.	CT2	
8.	CT3	

* Maximum 6 professional competences will be identified.
** The level descriptors indicated in the *Matrix* of the *National Qualifications Framework in Higher Education* (figure 3) shall be mentioned in the grid, according to the qualification level (Bachelor/Master's/Doctorate)

Appendix C

University: ..... **Faculty.....** **Qualification.....** **Study level.....**

Fundamental field..... **Study field.....** **Study programme.....**

Grid 2. ***Determining the correlations between professional and transversal competences, contents areas, study disciplines and credits allocated***

Professional competences	Competences detailed by level descriptors	Contents areas	Study disciplines	Credits	
				By discipline*	By competence
C1			**D1**		
			D2		
			….		
C2			**D1**		
			D2		
			….		
C3			**D1**		
			D2		
			….		
C4			**D1**		
			D2		
			….		
C5			**D1**		
			D2		
			….		
			D1		
			D2		
			….		

Transversal competences	Study disciplines	Credits	
		By discipline	By competence
CT1	**D1**		
	D2		
	….		
CT2	**D1**		
	D2		
	….		
CT3	**D1**		
	D2		
	….		

* Indicate the number of credits by which the respective discipline contributes to the development of competences, of the total number of credits allocated to the study discipline, according to the educational plan

CERTIFICATION OF DIGITAL SKILLS: A KEY ROLE IN EUROPEAN HARMONISATION AND MOBILITY

Francis ROGARD [1]

Abstract – *This article argues that linguistic skills represent a key role in European harmonization and mobility and that digital skills represent an equally important position in this 21st century of information and communication. The article also argues that many people in Europe suffer from the digital gap, which leads to a certain ignorance when it comes to the rights and duties linked with the use of the Internet. In these cases certification of skills is required for accurate estimates of the actual level of digital skills in a population. The article describes in detail recent certification policy directions and procedures in France in regard to sectoral digital skills in judiciary, engineering, health, and environmental planning.*

Key words: *digital skills; certification; professional contexts; skills evaluation*

Introduction

It seems obvious that linguistic skills represent a key role in European harmonization and mobility. Digital skills represent an equally important position in this 21st century of information and communication. It is obvious that many people in Europe suffer from the digital gap, which leads to a certain ignorance when it comes to the rights and duties linked with the use of the Internet.

In the Europass CV, digital skills are listed in the "Computer skills and competences" section among transversal skills in the "Personal skills and competences" chapter.

The Digital Mission for Higher Studies (MINES in French) of the French Ministry of Higher Education and Research (MESR) created the C2i® (French IT and Internet certificate) in order to develop, improve, validate and certify adults who have the required skills for the mastery of information and communication technologies. There is no other such certificate in this field at European level: it is adapted to various essential digital skills. The few private certificates that exist focus on office automation, and eventually deal with some software sold by the manufacturer. For instance, office automation constitutes 5 of the 7 PCIE modules, making it the most widespread certificate in Europe.

In order to meet every need, the C2i® is divided into two levels.

Level 1 (C2i1) proves the mastery of digital technologies using skills that allow the student to be responsible for his learning during the initial training at university and all his life time. There is a prospect of responsibility, independence and occupational integration. C2i1 is to be acquired during the academic year for the initial training students.

Level 2 (C2i2) proves the mastery of the transversal digital technologies using skills needed for a job and the ability of improving them throughout their professional career.

Level 2 of the C2i® comes in a range of professional specialized fields corresponding to large professional sectors. There are currently 4 fields of specialty for the C2i2: "legal professions" (C2i2md), "healthcare occupations" (C2i2ms), "engineer professions" (C2i2mi) and "environment and sustainable planning professions" (C2i2mead). New specialties are likely to be created for some other professional sectors.

Certification

The C2i® certification shows that people can acquire digital skills in relation to a specific level or specialty. Consequently, certification is made according to the validation non-validation of the skills of the corresponding frame of reference. Every area of expertise, according to a specific level and specialty, needs to be validated to obtain this certification. There is no equivalence between the fields.

An area of expertise is validated when, according to the level or the specialty, the related assessment is successful. The validation of a field cannot rely solely on this assessment.

The validated areas are capitalizable. In the event that the assessment is not passed successfully, a certificate specifying the validated areas of expertise is given to the candidate. These validated areas are

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acquired and are not to be validated again for another certification.

The validation of areas is based on a digital skills file. This file is created by the candidate and combines elements proving the acquired knowledge and skills needed for a C2i®'s frame of reference. These elements can result from activities proposed to the candidate and integrated, as much as possible, into his degree course; the assessment results; commented external productions resulting from activities that candidates do outside of their degree course. Exceptionally, they can be considered as productions resulting from terminal practical activities, especially for candidates who are not students of the certifying establishment (staff, outside candidates in continuous assessment), as well as for students who have specific degree courses and have not followed specific courses.

The digital skills file is at the disposal of the certification's board of examiners.

The frame of reference for C2i level 1 is outlined below.

C2I LEVEL 1: V2 REFERENTIAL

Area	Skill
D1 Working in a digital environment The user works in a digital environment that depends on the context in which he/she operates throughout life. The virtualization of resources and the risks of digital interoperability issues make this a complex environment. This means that users must adapt their behavior to specific multiple environments whilst taking into account the imperatives of trade and sustainability, as well as the risks associated with their situation in life.	**D1.1 Organizing an elaborated workspace**
	D1.2 To secure one's local and remote workspace
	D1.3 Considering the risks of interoperability
	D1.4 To ensure the continued existence of a user's data
D2 Responsibilities in the digital era Users operate in a stronger and more unpredictable digital environment, which interferes with their privacy. In this context, the substantive law and ethical principles regulate the exchange of information and ownership of digital resources. It also means that users keep their digital identity, take the rules and risks linked with the sharing of information into consideration and adopt a responsible attitude. Users are made aware of the regulations and laws on the good use of digital resources in order to avoid any infraction or mistake, and to represent their rights.	**D2.1 To keep one's digital identity private, institutional and professional.**
	D2.2 To ensure the protection of private life and personal data.
	D2.3 To responsibly adhere to the regulations on the use of digital resources.
	D2.4 To adapt oneself to the regulations and to the good use of online resources.
D3 To create, utilize and broadcast digital documents Users will have to create, utilize and broadcast digital documents which combine different types of data, with an aim of productivity and reuse. This means that they will have to conceive documents by using automation and will adapt them according to their purpose. The skills users work with can be used locally and online. They implement these skills by using current production software (text, slideshow, folder and online document).	**D3.1 To organize and format a document**
	D3.2 To automatically insert generated information
	D3.3 To create a composite document
	D3.4 To use data from a worksheet
	D3.5 To prepare or adapt a document for digital broadcasting
D4 organizing information searches in the digital era. In the digital era, information is plethoric and not verified, being produced and broadcast by all. This requires an evaluation of the information and resources found after thorough searches. Moreover, information found online is likely to evolve over time and appears as though in constant flow. This leads specific practices to refer to information and digital resources found on the Web, and on the other hand to be kept informed at all times. In this context, users set up an appropriate research approach and evaluate the quality of information they find with caution. They operate the information and resources to document their own productions in referencing them according to the rules. They put in place a watch over flow aggregation tools, and organize references in order to be able to access information whilst on the move.	**D4.1 Searching for information with an adapted approach**
	D4.2 Evaluating the results of a search
	D4.3 Retrieving and referencing an online digital resource
	D4.4 Organizing the surveillance of information

D5 Networking, communicating and collaborating When you conduct a project or an activity in a personal or professional setting, exchanges between those concerned often take place in digital form. Making good use of communication and collaborative working tools improves the effectiveness of the work led in a team. In this context, the user uses individual or group digital communication tools with discernment and efficiency to exchange information or to organize work in a group. In the case of long-distant collaboration, an individual contributes to the synchronous or asynchronous production of common documents and keeps track of modifications of the successive versions of these documents.	**D5.1 Communicating with one or more speakers**
	D5.2 Participating in the organization of the online activity of a group
	D5.3 Implementing production in a collaborative context

Level 2 skill frameworks; they have three common or cross-sectional areas and one or two specific areas following the professional sector as follows:

C2I2 FRAMEWORK– Version 2011-05-18

Cross-sectional area D1:

RULES AND OBLIGATIONS LINKED TO DIGITAL ACTIVITIES

Introduction:

The creation and processing of digital data is governed by a set of laws, regulations and jurisprudence that any professional must know and respect in the exercise of his activity.

This means inter alia that the professional must be able to:

- clearly distinguish personal digital data from professional digital data,
- process and disseminate in a legal framework professional data containing or not containing personal information
- adapt one's behaviour in relation to the legal devices to which users are submitted.

Framework:

Competence D1.1: Respecting & incorporating the legislation relative to the protection of individual freedoms

- *Identifying professional situations in compliance with the legislation related to the protection of individual freedoms*
- *Adopting a responsible and citizenly attitude relative to the functions held*
- *Identifying and understanding the legislative aspects related to the protection and respect of individual freedoms*
- *Identifying and understanding in legal documents or professional regulations the limitations and respects related to this legislative area (work contracts and agreements)*
- *Identifying professional situations related to the respect of rights and duties linked to the protection of personal data and situations covered by:*
- *The domain of the CNIL and the NHIC*
- The declarative obligations of the processing of personal data and information of individuals concerned.
- Adopting good practices associated to situations encountered and/ or identified (making the necessary statements, informing the CNIL correspondent,...)

Competence D1.2: Respecting & integrating the legislation on digital works related to professional contexts

- Identifying professional situations that may be affected in compliance with the legislation on the protection of digital works.
- *Identifying the rights associated with digital resources used in professional contexts*
- *Decrypting legal mentions associated to digital data*
- *Identifying the eligible in problem situations integrating digital resources*
- *Performing requests for of law or exploitation assignments.*

Competence D1.3: Respecting and integrating the legal aspects related to the protection and accessibility of professional data

- *identifying professional situations affected by accessible legislation and those affected by the protection of data*
- *adopting a relevant attitude to situations*
- *taking into account the need for protection and securing professional data*
- *taking into account the obligations of provision and access to public data*

Cross-sectional area D2 :

STRATEGIES OF RESEARCH, EXPLOITATION AND VALORIZATION OF DIGITAL INFORMATION

Introduction:

The field of information relates to research, assessment, and document referencing. It can be seen on the one hand, as a tool for decision making and on the other hand, as an instrumental resource of communication strategy.

In this context, professionals must be able to:

- identify their needs in terms of information,
- locate the appropriate information,
- assess and exploit the information withheld.

Framework:

Competence D2.1: Developing and implementing a strategy for finding information in a professional context

- Deploying an information research methodology using digital data
- Analyzing the validity, the relevance and value of the digital information collected

Competence D2.2: Developing and implementing a strategy of informational surveillance in a professional context

- Designing and deploying a strategy of informational monitoring using the appropriate digital tools

Competence D2.3: elaborating a strategy of development and enhancement of professional skills

- Constituting a portfolio of professional skills
- Identifying and using adapted digital resources to the context so as to develop one's professional skills

Cross sectional area D3:

ORGANIZATION OF COLLABORATIONS WITH THE HELP OF DIGITAL DATA

Introduction:

The new communication tools currently enable the strengthening of collaborative activities within professional bodies.

They can collect, combine and manage knowledge collectively produced through projects and activities piloted via distance learning.

Individuals involved in a collaborative project should thus be able to:

- identify digital tools for the implementation of a project,
- facilitate and coordinate work groups via distance learning,
- take into account the technical and organizational constraints related to the exchange of digital information.

Framework:

Competence D3.1: Organize collaborative work, using new digital technologies

- *Formalize technological and organizational needs according to purpose, context, and actors*
- *Set up collaborative work using the corresponding technologies*
- *Specify the roles and responsibilities of each actor within the system*
- *Organize a collaborative workspace*
- *Identify the types of data or created / modified documents at each step*
- *Understand the flow of information as to identify points of collaboration and transfers of roles (principles of* workflow)
- *Know how to anticipate incoming developments in the design phase and to facilitate decision making*.

Competence D3.2: Coordinate and facilitate collaborative activities in a digital environment

- *Adopt and push for a behavior consistent with the rules of practice in order to carry out cooperation projects*
- *Communication between players: use synchronous communication tools wisely (shared applications, virtual meetings, instant messaging, etc.) and asynchronous communication tools (e-mail, forum, blog, mailing list, etc.)*
- *Spread and enforce good practices*

Competence D3.3: Adapt, modify, and transmit data in accordance with interoperability within the context of collaborative work

- *Adapt resources of different origins in order to be shared, operated or transferred using interoperability benchmarks tailored to professional contexts:*
  - *Identify interoperability business frameworks.*
  - *Adapt collected resources to the required format (local, cooperative, collaborative).*
  - *Change broadcasting data formats in the expected reference*
  - *Document lifecycle management*

Specific areas of specialty “Judiciary sector”

Specific Field D4 - C2I2md
DOCUMENT LIFECYCLE

Competence D4.1: Develop electronic documents and use aid systems in the development of documents
Competence D4.2: Mastering digital exchanges between judicial or legal actors and the services offered to citizens:

- administrative e-procedures;
- computerized legal information systems.

Competence D4.3: Securing Digital Exchange:

- understand Cryptography and its implementation;
- secure transmission of information;
- secure exchanges between professionals.

Competence D4.4: Archive information:

- protect the integrity of content;
- ensure the stability of informational content over time.

Specific Field D5 - C2I2md
PROFICIENCY IN THE OUTLINES OF DIGITAL ECONOMY

Competence D5.1 Understand the context:

- services, tools, market operations;
- e-commerce;
- technological monitoring.

Competence D5.2 Identify stakeholders:

- role and quality of actors;
- responsibility of actors;
- actor’s right of communication.

Competence D5.3 Tool control

- digital contract and digital signature;
- digital prospecting and advertising;
- intellectual and commercial property.

PREVENTION of risks: the fight against cybercrime

Competence D5.1 Proficiency in the legislation and jurisprudence of Cybercrime

Competence D5.2 Prevent acts of cybercrime in a professional context
- external attacks
- internal behavior

Specific areas of specialty «Health sector»

Specific Field D4 - C2I2ms:
SYSTEM AND HEALTH INFORMATION PROCESSING

Introduction: The information concerns research, evaluation and treatment of data. It can be seen on the one hand, as a decision-making support, as an instrumental resource of analysis, diagnosis and expertise and as a means of acquiring new knowledge. In this context, the professional should be able to:

- have a basic knowledge of technical solutions, including systems of information processing
- exploit data and extract the added value for the decision-making support,
- acquire a critical eye and high standards of data manipulation.

Competence D4.1: System of Operational Information, and Production

Collect, store, treat the necessary data.

- *Issue of medical documents (certificate, prescription, patient medical record...), Medico-technical development, Production of Prosthesis (artificial limbs, dentures)*
- *Assess the quality and safety of exchanges: authentication directories,*
- *Medico-economic Production (PMSI-T2A)*

Competence D4.2: Information Communication System

Communicate information internally (Messaging, network, workflow, groupware, portal, knowledge management) and external (EDI standard exchange)

- *Grasp the notion of mobility of a patient’s medical record (multi-frame heterogeneous synchronizing)*
- *Use of medical data banks*
- *Use accessible electronic journals on the Internet, reference media and connectivity conferences (e.g. Learned Societies, HAS, BFES)*

Competence D4.3: Clinical decision support system

- *Aid to dispensation, aid to drug interaction, aid to counter indications management, aid to clinical decision, aid to therapeutic decision…*

Specific areas of specialty «Engineering sector»

Specific Field D4 - C2I2mi:
INFORMATION SECURITY AND INFORMATION SYSTEMS

Competence D4-1: control the processes of a security policy to participate in its implementation.

Competence D4-2: distinguish the actors involved in the implementation of security policy and identify their legal liabilities.

Competence D4-3: identify and prioritize information in an adequate way.

Competence D4-4: assess security procedures and know the limits of the tools used in information processes, according to location and access mode.

Competence D4-5: estimate accidental and intentional risks so that the necessary arrangements can be made.

Specific Field D5 - C2I2mi:
MANAGEMENT OF INFORMATION SYSTEMS PROJECT

Competence D5 - 1 understand the issues of the information system from the point of view of the project manager.

Competence D5 - 2 identify the actors and the stages of an "information system" project to ensure a well- informed approach.

Competence D5 - 3 voice all requirements to the project manager throughout the project.

Competence D5 - 4 meet interoperability and accessibility requirements from the point of view of the project manager.

Competence D5 - 5 interpret a document of data or business process modeling.

Specific areas of specialty «Environment and sustainable development sector»

Specific Field A - C2I2mead:
PROCESSING SYSTEMS OF INFORMATION IN THE FIELD OF THE ENVIRONMENT AND PLANNING

Introduction: The information in the fields of environment and sustainable development concerns research, evaluation and treatment of data. It can be seen on the one hand, as a decision-making support, as an instrumental resource of analysis, diagnosis and expertise and as a means of acquiring new knowledge. In this context, professionals should:

- *have a basic knowledge of technical solutions, including systems of information processing*
- be able to exploit data and extract the added value for the decision-making support,
- *acquire a critical eye and high standards of data manipulation.*

Competence D4.1. Recognize and identify databases and the processing tools for spatialized and thematic data.

- *Identify the structure of a database*
- *Identify formats and associated data types.*
- *Describe a chain of data processing*
- *Identify the tools adapted to these treatments.*

Competence D4.2. Use of appropriate processing tools in order to transfer data to a knowledge base or a diagnosis

- *Collect and consult the existing digital data*
- *Retrieve and produce data*
- *Process and analyze data*
- *Describe and prioritize tasks, set priorities.*

Competence D4.3. Ensure the technical and thematic validity of results.

- *Take into account the limits of data and tools available according to subject area*
- *Be aware of the repositories related to environment and urban / rural planning professions*
- *Assess the reliability of data at the different stages of the processing chain and check their consistency.*
- *Master the characteristics of data in order to assess their value and establish the appropriate criteria for validity.*

Specific Field B - C2I2mead:
COMMUNICATION FOR ENVIRONMENT AND DEVELOPMENT

Introduction: *Digital tools are now used for any information broadcast on the environment or development.* Professionals should be able to design the process, carry out or have a third party carry out visuals for the restitution and dissemination of knowledge to different audiences. For this, professionals should:

- *Identify the standards of edition in use*
- *Respect the semiology of graphics in the production of documents (semiology of graphics means the correspondence between visual variables and variables of a different nature which provides the meaning of the sign).*
- *Produce targeted communication media (websites, posters, leaflets).*

Competence D5.1. Refer to the norms and standards for publishing and disseminating digital materials.

- *Identify the different norms and standards for editing (documentary, techniques, accessibility, interoperability...)*
- *To comply with the editorial guidelines or standards identified in the conducted productions (reports, maps, images, metadata…).*

Competence D5.2. To comply with the rules of semiology in use to produce graphic and cartographic documents.

- *Identify and respect the conventions of performances associated with the different contexts of use and cultures (ex: conventions for national parks, ..)*
- *Use the rules of semiology to establish graphical representations (maps, plans, process, development programs, diagrams, data, ...) to convey information.*
- *Master the rules of the semiology of graphics associated with depictions of the field of environment or development*
- *Create a thematic map or a result on a chart adapted to objectives and data rules*

Competence D5.3. Design and realize communication media suited to targeted audiences.

- *Identify the features offered by digital design media and the broadcast of information.*
- *Know the chain of design of a medium of communication.*
- *Formalize key structuring communication support (ex: guidelines of specifications).*
- *Be capable of producing at least one channel of information for a targeted audience.*

NATIONAL REGISTER OF QUALIFICATIONS IN HIGHER EDUCATION (RNCIS) – THE FACEBOOK OF ROMANIAN UNIVERSITIES

Sorin ZAHARIA [1]
Mariana MOCANU[2]
Alexandru ENESCU[3]

Abstract – *This article gives a detailed description of the background and the processes involved in developing the national registry of qualifications for higher education in Romania (RNCIS) within the DOCIS project. It deals in detail with the technical specifications and functionality of the RNCIS online system and describes its functions for a range of different users. It looks towards the future of the system and the developments and functionalities planned*

Keywords: *qualifications national registry; online system; search engine, applications architecture; systems management*

1. Context

The first step towards developing a qualification framework for the European Higher Education Area was the Bologna Declaration in 1999, when a separation between the first and the second studies cycle was proposed. In the following related conferences at Berlin (2003) and Bergen (2005) signatory countries committed to create national qualification frameworks until 2010. The national qualification framework for higher education is a unique description, at national level, of all qualifications and other learning outcomes following the successful completion of a recognised higher education programme of study. In 2009, at Leuven, it was decided that by 2012 all National Qualification Framework should be implemented and ready for self-certification.

In Romania, the National Qualifications Authority (ANC, former UECNCFPA/ACPART) runs the strategic project called DOCIS whose aim is to create the National Qualifications Framework for Higher Education (NQFHE). This project started from the following key questions:

- How visible / transparent / legible is the national higher education system?
- Does it answer to the needs of the labour market? In what way?
- How can an employer know which are the competencies of a higher education graduate?
- Which is the European and national context in which the project will develop?

One of the specific goals of the project is the development and implementation of the National Register of Qualifications in Higher Education – RNCIS. This is an integrated web application that centralizes all descriptions of higher education qualifications in a digital structured format, in a national database which can offer a powerful and flexible search engine for qualifications, study programmes and occupations. Furthermore, RNCIS is intended to be a management instrument for NQFHE by providing valuable information about all qualifications offered by accredited Romanian universities, both to authorities and to the general public.

2. RNCIS Goals

RNCIS is an instrument for identification, registration, permanent view and update of qualifications offered by universities in Romania. It will help the students and employers in making good decisions and it will offer an overview of the provision of the universities, assuring in this way the transparency and the visibility of NQFHE at national and international level.

RNCIS is developed based on the NQFHE Methodology that stipulates the identification of the learning outcomes for each qualification. In this way, any learning outcome has its own autonomy, indicating different targets of formation, specialized professional training processes and specific evaluating processes. There are interdependent relations between these three types of learning outcomes, as well as an hierarchy in the process of achieving these results as follows: certain types of knowledge build abilities, and a specific combination of knowledge and abilities develops a competence.

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3. To whom RNCIS is addressed

The largest category of RNCIS beneficiaries is represented by the **students** and/or **prospective students.** For them, RNCIS represents a comprehensible, transparent and accessible instrument which expresses very clearly the opportunities of having their learning outcomes recognized, so they can take appropriate and founded decisions regarding the content of the study programmes they want to follow and the credits they need in order to graduate and to obtain a specific qualification.

For the **Universities,** RNCIS is offering new opportunities for development, implementation and management of the educational process. This is a very useful thing if we consider that the universities as "keepers of the key for society and the economy based on knowledge development", are in an open competition for "clients" for the study programmes. This is highlighted by statistics which reveal that the rate of university enrolment continuously increased in the last decade. This situation is explained by the development of private universities and of universities' networks, by establishing new universities or new branches of universities in non-traditional locations, under the influence of demands from a changing labour market.

Members of sectoral committees and social partner's personnel represent another category of beneficiaries of the RNCIS software application. This is relevant because the qualifications system cannot exist and have an impact outside an economic and social environment which actively interacts with the academic environment. The first need of the employers is to have the right people for the right job. A better suitability of qualifications and competences with the needs of the labour market, as well as the capacity of fast adaptation of the universities to the changing needs of the labour market, is the common needs of universities and employers. In this way, through RNCIS, the employers will be able to check if their expectations regarding the knowledge and competences of a graduate, future employee, are fulfilled.

Career consultants or parents can use RNCIS, too. They can use the software application to see the real provision of the universities or they can consult the registry to be in the position to give the best advice about what study programme one should follow in order to be able to get certain jobs after graduation.

4. RNCIS Architecture

4.1. The hardware architecture

RNCIS is a Web-based application, exposing powerful functionalities over the Internet, according to the general architecture that is shown in Figure 1.

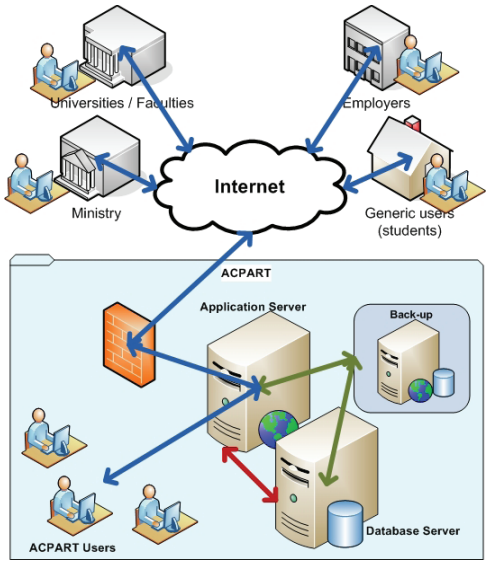


FIGURE 1 – The Hardware Architecture of RNCIS

As one can see in Figure 1, RNCIS is designed to optimally work using 3 servers:

- *An application server* – this server will host application system components during normal functioning;
- *A database server* – this server will host the database system components during normal functioning;
- *A back-up server* – this server will be able to store for a limited period of time back-ups of the application and of the database, according with the back-up policies of UECNCFPA, before these being moved on a long storage device. Also this server will be able to host database and application components, which will be used as a test instance, by being reconfigured for a short period of time, in order to replace any of the other two servers or even both in the case of malfunctioning or during maintenance operations.

4.2. The Software Architecture

RNCIS is an application based on open technologies. It relies on Oracle Database management system and uses Java 2 Enterprise Edition (J2EE) technologies through an Oracle Application Server. RNCIS allows for the creation and management of qualifications, the search of qualifications through different filtering criteria, and running of reports including their export in different usual formats (.html, .csv, .xls, .pdf). The application also provides the necessary operations for the management of dictionaries used by RNCIS.

The functions of RNCIS are offered by a series of standard or custom components, with specific dependencies. These components are presented in Figure 2 and described in paragraph 6 – RNCIS functionalities.

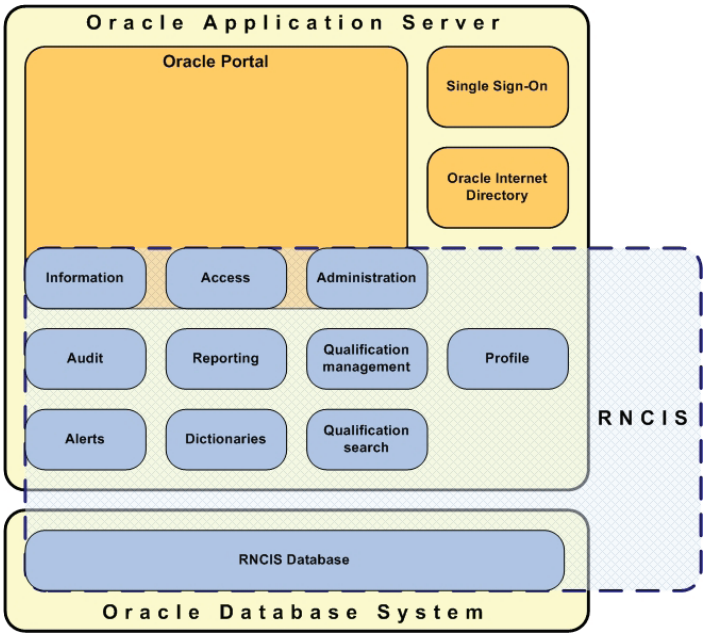


FIGURE 2 – The Software Architecture of RNCIS

5. RNCIS Users

In order to ensure access to information related to the higher education system in Romania, and also to serve as an working instrument for universities and ACPART, several classes of users were defined, having specific rights, as follows:

- The anonymous user (not authenticated) will have access, only at informational level, to the descriptions of all study programmes within RNCIS. These descriptions will be accessible after using the search engine and several searching criteria.
- Universities and faculties will have, beyond the functionalities accessible to an anonymous user, the possibility to prepare and publish their educational provision and to establish a direct connection between their own sites, with the description of research and didactical activity, and the existing RNCIS qualifications.
- Also, in the case of a new qualification, the university which initiated it has the obligation of entering it into RNCIS.
- The education ministry will have access in RNCIS for information and for generating different reports on the educational provision of Romanian universities.

In order to assure that RNCIS will achieve its goals, ANC users will have to enter into the system the current authorized higher education qualifications. Also, they will have to authorize the adding of new data in RNCIS, as well as administering the entire software application. Furthermore, ANC users will be able to supervise the modifications made by universities and will be able to generate different reports and analyses.

6. RNCIS Functionalities

The core of RNCIS portal is made us of the qualifications offered by Romanian universities, and the system is designed to ensure a proper access to qualifications from any page within the system, and the possibility to correlate the universities offerings with the jobs used by the labour market.

The main functionalities of the system can be group as follows:

a. Searching for qualifications

The qualification searching engine permits finding details about a certain qualification, based on different filtering criteria. This functionality is available to all users accessing the application, without the need for authentication. There are two ways of searching qualifications, based on the list of available filtering criteria: simple search and advanced search. Both search methods are available using the menu of the RNCIS application.

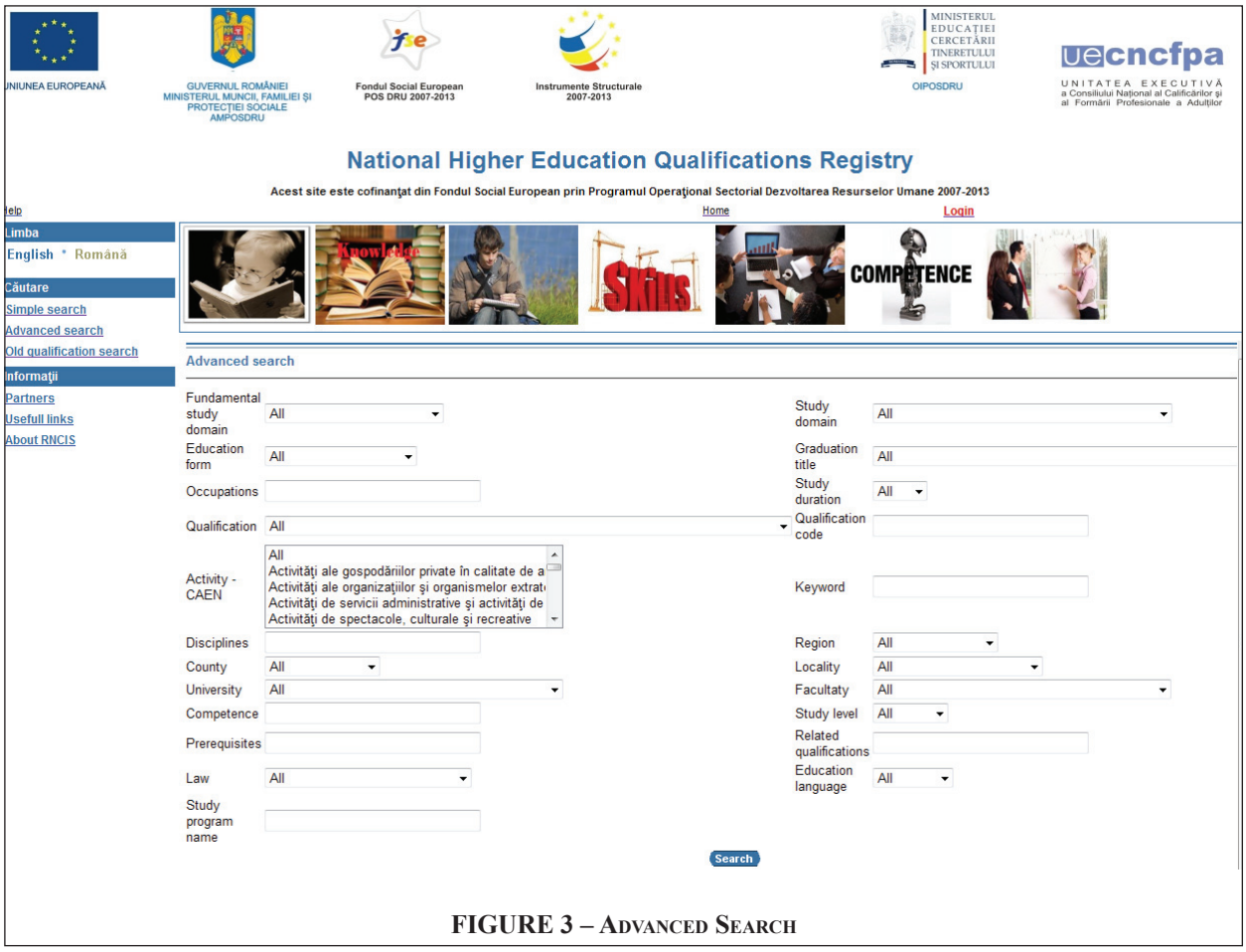
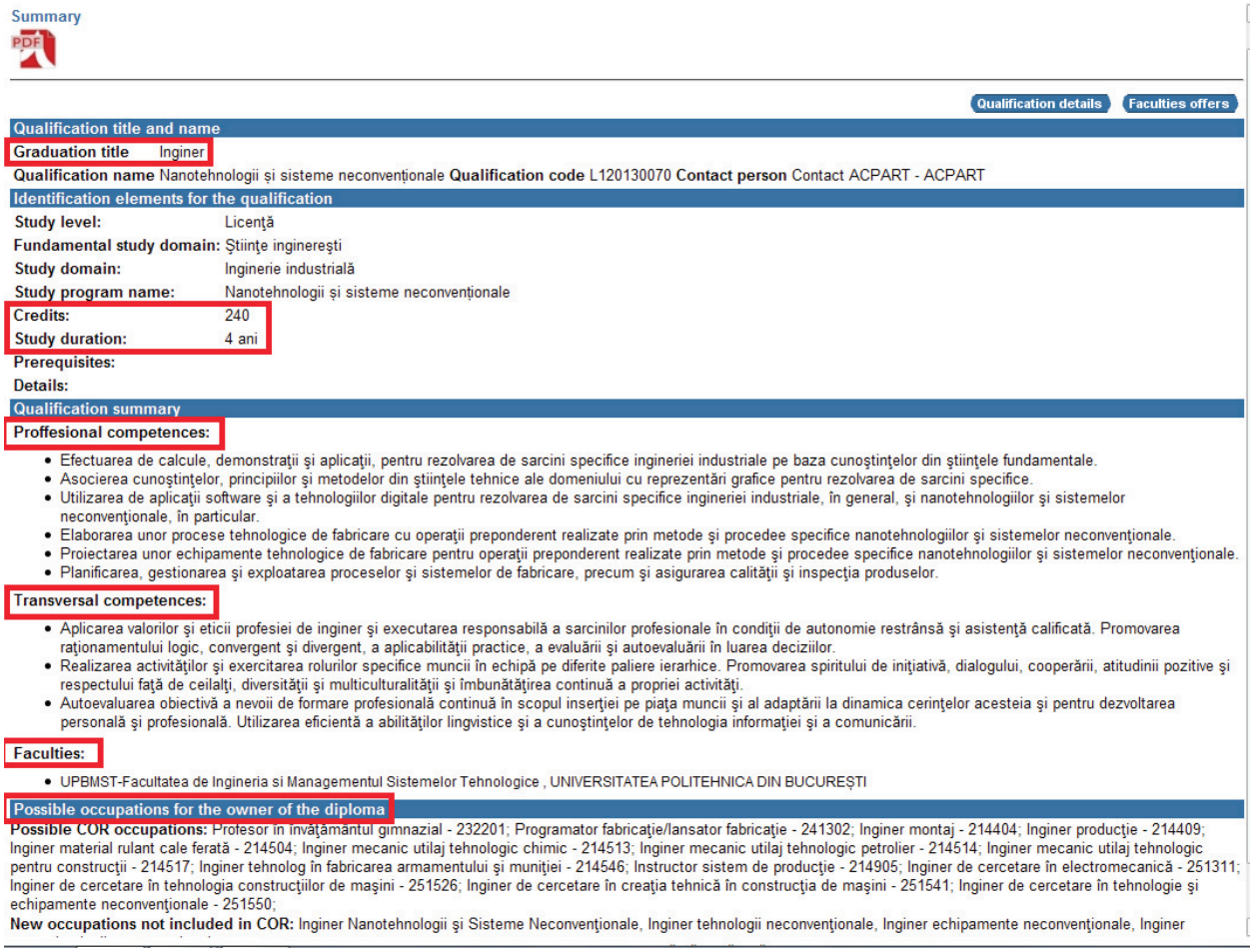


FIGURE 3 – ADVANCED SEARCH

b. Qualifications Description

All qualifications in RNCIS are described in a unitary way which is easy to read and understand. Accessing the summary of a qualification, a user can easily obtain valuable information such as study duration, graduation title, number of necessary credits for graduation, professional and transversal competences, faculties which offer this qualification, possible occupations for the owner of the diploma, etc.



Summary

Qualification details | Faculties offers

Qualification title and name

Graduation title Inginer

Qualification name Nanotehnologii şi sisteme neconvenţionale **Qualification code** L120130070 **Contact person** Contact ACPART - ACPART

Identification elements for the qualification

Study level: Licenţă
Fundamental study domain: Ştiinţe inginereşti
Study domain: Inginerie industrială
Study program name: Nanotehnologii şi sisteme neconvenţionale
Credits: 240
Study duration: 4 ani
Prerequisites:
Details:

Qualification summary

Proffesional competences:

- Efectuarea de calcule, demonstraţii şi aplicaţii, pentru rezolvarea de sarcini specifice ingineriei industriale pe baza cunoştinţelor din ştiinţele fundamentale.
- Asocierea cunoştinţelor, principiilor şi metodelor din ştiinţele tehnice ale domeniului cu reprezentări grafice pentru rezolvarea de sarcini specifice.
- Utilizarea de aplicaţii software şi a tehnologiilor digitale pentru rezolvarea de sarcini specifice ingineriei industriale, în general, şi nanotehnologiilor şi sistemelor neconvenţionale, în particular.
- Elaborarea unor procese tehnologice de fabricare cu operaţii preponderent realizate prin metode şi procedee specifice nanotehnologiilor şi sistemelor neconvenţionale.
- Proiectarea unor echipamente tehnologice de fabricare pentru operaţii preponderent realizate prin metode şi procedee specifice nanotehnologiilor şi sistemelor neconvenţionale.
- Planificarea, gestionarea şi exploatarea proceselor şi sistemelor de fabricare, precum şi asigurarea calităţii şi inspecţia produselor.

Transversal competences:

- Aplicarea valorilor şi eticii profesiei de inginer şi executarea responsabilă a sarcinilor profesionale în condiţii de autonomie restrânsă şi asistenţă calificată. Promovarea raţionamentului logic, convergent şi divergent, a aplicabilităţii practice, a evaluării şi autoevaluării în luarea deciziilor.
- Realizarea activităţilor şi exercitarea rolurilor specifice muncii în echipă pe diferite paliere ierarhice. Promovarea spiritului de iniţiativă, dialogului, cooperării, atitudinii pozitive şi respectului faţă de ceilalţi, diversităţii şi multiculturalităţii şi îmbunătăţirea continuă a propriei activităţi.
- Autoevaluarea obiectivă a nevoii de formare profesională continuă în scopul inserţiei pe piaţa muncii şi al adaptării la dinamica cerinţelor acesteia şi pentru dezvoltarea personală şi profesională. Utilizarea eficientă a abilităţilor lingvistice şi a cunoştinţelor de tehnologia informaţiei şi a comunicării.

Faculties:

- UPBMST-Facultatea de Ingineria si Managementul Sistemelor Tehnologice , UNIVERSITATEA POLITEHNICA DIN BUCUREŞTI

Possible occupations for the owner of the diploma

Possible COR occupations: Profesor în învăţământul gimnazial - 232201; Programator fabricaţie/lansator fabricaţie - 241302; Inginer montaj - 214404; Inginer producţie - 214409; Inginer material rulant cale ferată - 214504; Inginer mecanic utilaj tehnologic chimic - 214513; Inginer mecanic utilaj tehnologic petrolier - 214514; Inginer mecanic utilaj tehnologic pentru construcţii - 214517; Inginer tehnolog în fabricarea armamentului şi muniţiei - 214546; Instructor sistem de producţie - 214905; Inginer de cercetare în electromecanică - 251311; Inginer de cercetare în tehnologia construcţiilor de maşini - 251526; Inginer de cercetare în creaţia tehnică în construcţia de maşini - 251541; Inginer de cercetare în tehnologie şi echipamente neconvenţionale - 251550;
New occupations not included in COR: Inginer Nanotehnologii şi Sisteme Neconvenţionale, Inginer tehnologii neconvenţionale, Inginer echipamente neconvenţionale, Inginer

FIGURE 4 – SUMMARY OF A QUALIFICATION

c. Presentation of Universities Offer

Together with displaying search results, the system presents next to the involved study programme the list of faculties offering the qualification in order to facilitate the users' access to universities. Such a list will also be available in the "Qualification details" section. The universities provision of courses will be differentiated by comparing curriculum and additional competences a university can offer for a certain qualification.

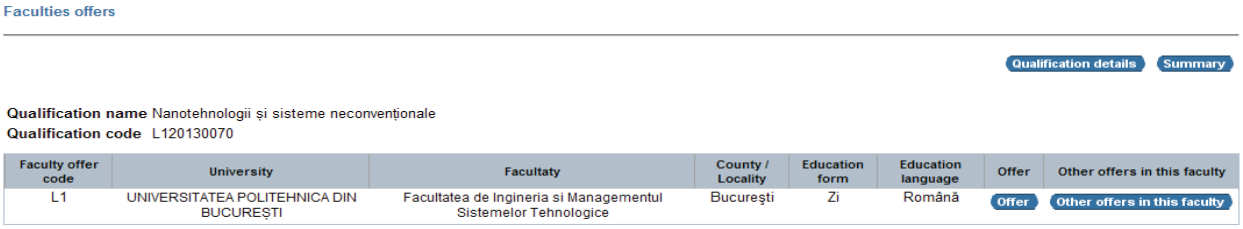


FIGURE 5 – UNIVERSITIES OFFER

d. Qualifications Management

The qualifications management component is a key element of RNCIS. By accessing it, users having faculty, university or ANC roles can define the qualifications by describing their characteristics (special attributes), competences, descriptors of learning results and specific study offer.

The qualifications, the competences and the involved descriptors observe some general presentation rules which apply to all RNCIS entities: they are presented tabular, having a button for adding new elements, while updating or deleting them is possible by accessing dedicated links, which normally appear on the last columns of the table.

A new qualification is entered into the system using a dedicated button named "Add qualification" and by following the appropriate steps.

The user has the opportunity to fill in all the attributes of a qualification using the form for adding a new qualification. For each form attribute exists an appropriate HTML control, according to the attribute's specific values (combo-box, radio button, text box etc.). The mandatory attributes have a specific marker to indicate they are mandatory (for example, a star near the name of the field). Certain validation rules will be applied both on the client side, before sending them to the server, and then on server side, before storing them into the database.

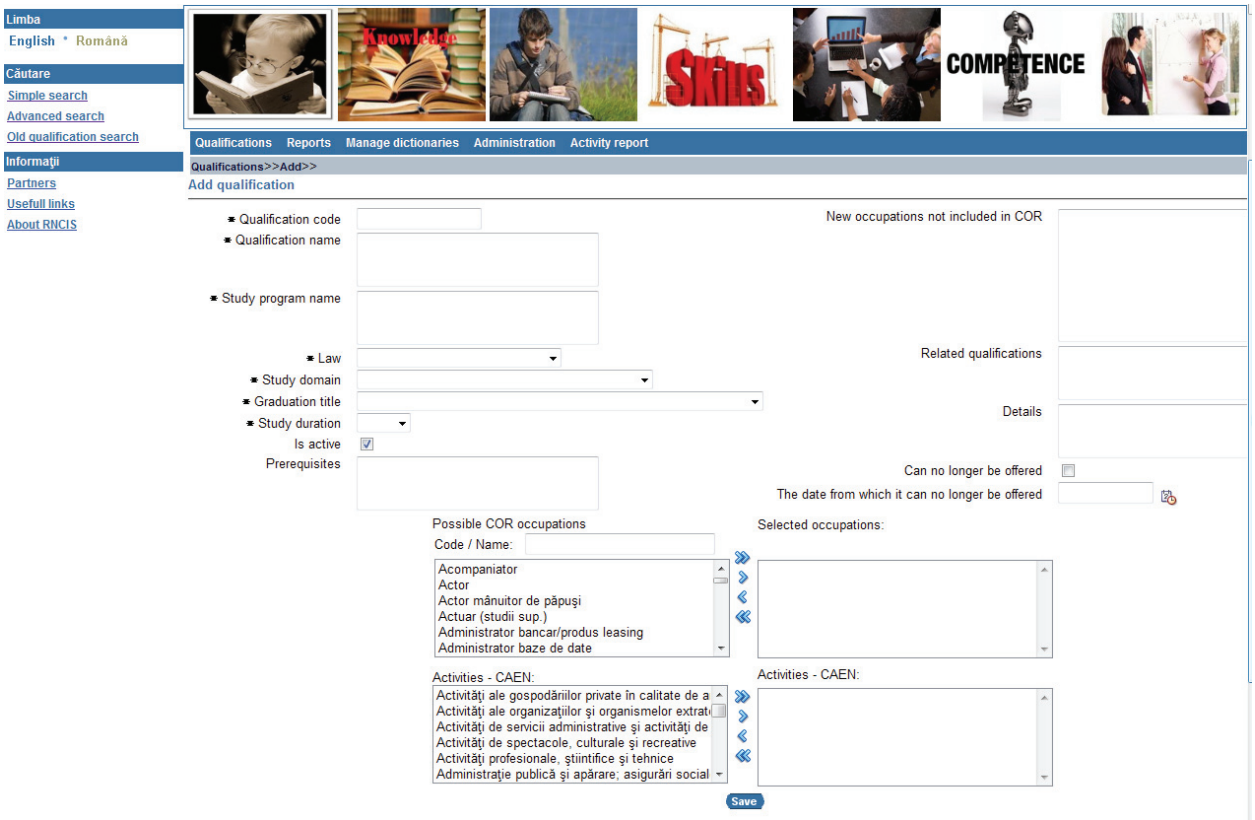


FIGURE 6 – EDITING QUALIFICATIONS

For defining a qualification, the user having proper rights must first define the competences characterizing the qualification; this can be achieved by using the "Add competence" button. After pressing this button a detail page will open in which the user will be able to fill in the characteristics of the competence. Adding a competence will obey the rules regarding the competence number and type, as they are established by the *NQFHE Development Methodology*. A new competence will be connected within the application using specific mechanisms to the general qualification description, used by all faculties offering the involved study programme, or to the supplementary description made by a certain faculty. For every competence the application will provide modification links.

Once in the system, a qualification can be viewed or edited by accessing the link for editing qualification displayed usually on the last column of the qualification table. The form used for editing and viewing a qualification is similar with that used for adding a new qualification in the system, with the difference that all fields are initialized (prefilled) with the values already stored in the database. The edit qualification form has a save button, which initializes the persistent storing in the database of the information within the form. The form dedicated for viewing has only a "Back" button, in this way being impossible to alter the presented data.

From the form containing the details of a qualification we have the possibility to add new details for the qualification, depending of the specific rights of the current user. Once details are added, they can be further edited, viewed or deleted.

The faculties which offer additional competences besides the ones established at national level have the possibility to describe them in a dedicated page which is associated to a qualification. One can insert at most 3 extra competences, from which at most 2 can be professional ones.

Also, in the specific page of a faculty, the application enables users to visualise details of an existing competence in terms of content areas, disciplines and credit points. At user interface level, this corresponds to the automatic generation of a line for each competence associated with the qualification in case. Each such line will permit to fill in content areas, having buttons for adding, editing and deleting the involved disciplines and credit points. Management of the disciplines will ensure the validation rules for credit points, according to the *NQFHE Development Methodology*. In the dedicated page, a faculty has the opportunity to upload the curriculum for each qualification it offers. The faculty takes full responsibility for the information presented in the specific page.

Also, in the qualification section, the management of the versions for describing a qualification will be made, by presenting them in a table for the users with appropriate access rights. Every qualification will have three states: under development, published and archived.

e. Reporting

Based on multiple criteria, RNCIS gives the possibility of generating complex reports, such as:

- Reports regarding faculties which offer a certain qualification for a certain level, in general, or in a city, or in a certain region, qualification needed for a certain occupation;
- Reports regarding universities / faculties where you can obtain specific knowledge, abilities or competences (for example: informatics, mathematics or theatre knowledge);
- Reports about the bachelor and master programmes;
- Reports about access condition at a certain level of a qualification, for a qualification, at a certain university;
- Classification of occupations using different criteria: qualification, fundamental domain, study domain, study programme;
- Reports about the modifications made by a university;
- Reports about new qualifications, introduced in a specific period of time, etc.

The system permits the generation of predefined reports, after a predefined structure, and reports without a predefine structure.

f. Administrating the Application

The administrating component of the system will be structured on different levels, corresponding to the specific administrating functionalities:

- At database level, the administration will be realized by *the database administrator*, through the tools provided by the Oracle Database, such as Enterprise Manager or SQL Developer;
- At portal level, administration will be accomplished by *the portal administrator*, with the help of the administration functionalities offered by Oracle Portal;
- At application level, a series of administrating options will exist, controlled by RNCIS and available to dedicated users with the role *of RNCIS application administrator*.

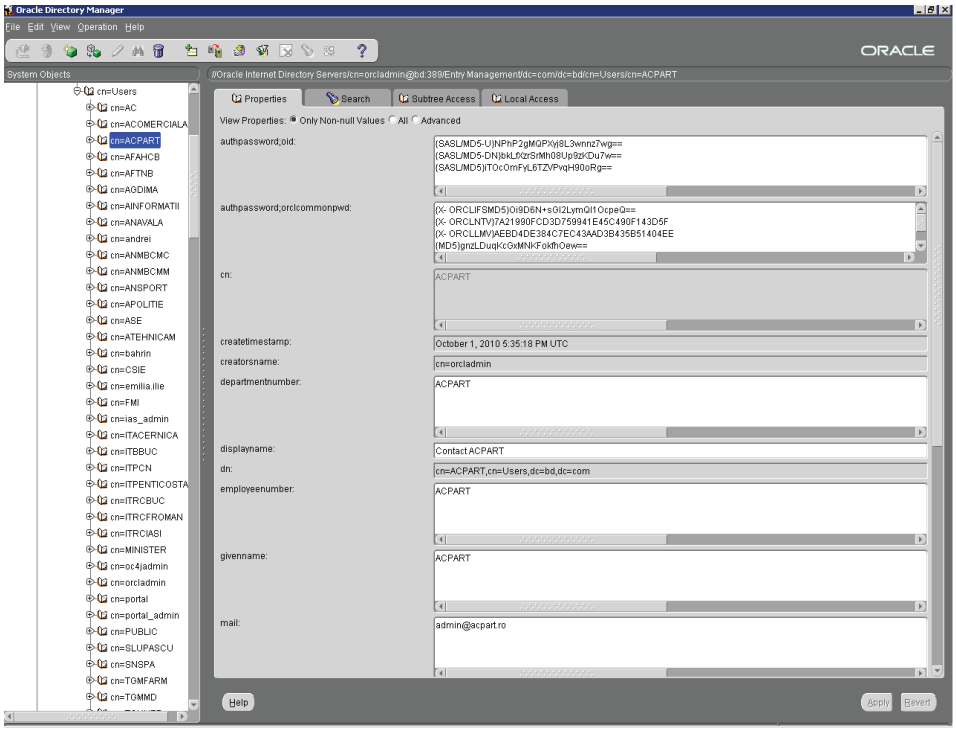


FIGURE 7 – ADMINISTRATING THE APPLICATION

g. The access Component

The access component of the application controls the user access, from the point of view of authentication, authorization, access control and data control.

The high accessibility to data and business information requires an increasing attention to security threats. Oracle Application Server provides verified mechanisms for ensuring the security and for identity management including efficient politics for password management.

The key components of Oracle Application Server security system are:

- *OAS Single Sign-on,* which permits the authentication of the users by providing a password when logging into the system, all further connections being transparently authenticated;
- *Oracle Internet Directory* is the Oracle service which implement Lightweight Directory Access Protocol, the standard for maintaining tree-like structures for users and resources;
- *Oracle HTTP Server* has its own security mechanisms being first recipient of HTTP requests to Oracle Application Server;
- *Java Authentication and Authorization Service* is the Java standard for development of J2EE secure application.

6. CONCLUSIONS AND FURTHER DEVELOPMENT

The RNCIS portal is a powerful instrument which allows both the administration of the National Qualification Framework and the higher education offer visualization, on different levels of details. This way, different classes of users can access the information they need quickly and easily.

The system assures the transparency of the educational offerings and, in the same time, gives to the universities and faculties the possibility to underline the peculiarities of their own awards and holding them responsible for the specific information.

The management systems for describing qualifications, as well as the possibility of identifying previous qualifications, lead to a complete image of the higher education system evolution.

Although the system is not fully loaded (the aim of the DOCIS project is to have 500 qualifications described by November 2011) we can already say that some qualifications are very much alike from the competences point of view.

By calculating the credits per competences we can observe that not all the competences are equally sustained. Is it all right for our education system that a competence is achieved by obtaining 50 credit points while another competence is achieved with only 10 credit points from a total of 240?

RNCIS allows universities to differentiate themselves by introducing their own provision – a maximum of 3 specific competences per qualification, or by specificity of curricula.

While populating the system with data, we've observed that one of the most debated field was the one for possible occupations, which, in our opinion, means that universities show a high interest for the labour market. But, in some cases, this leads to over-valuation of the university award. We can see the example of

the *software developer* occupation, which according to some, after graduation from all 23 study programmes can lead to jobs in occupations such as: Manufacturing engineering, Welding engineering, Knitwear and clothing technology, Technology and design of leather and substitutes, etc.

For further development of RNCIS we intend to extend the system functionalities in order to allow an online file submission for a new qualification. In this way we intend to make the evaluation process for a new qualification faster and to reduce the paper consumption.

BUILDING THE BRIDGE WHILE WALKING ON IT
A LIFELONG LEARNING PROJECT SUPPORTING THE EQF IMPLEMENTATION

Cătălina Hîrceag[1]

Abstract – *With the growing diversity and need for mobility within the European Union, the development of qualifications frameworks – national and European meta-frameworks – has been seen as a tool facilitating links between the world of education and training and the world of the labour market, providing preparation for life as active citizens and enabling mobility within Europe. It is strongly argued among policy experts that European qualifications initiatives need to come together in a coherent and harmonized approach to ensure transparency, readability and comparability of frameworks.*

The project presented in this article – HEQ_Bridges – illustrates an attempt at reflecting on diversity of qualifications at European level and suggesting how the two European meta-frameworks can converge and make comparability of qualifications possible. The article describes the project aims and objectives, as well as its outcomes, including the main findings and conclusions of the three reports produced by the project partners.

Introduction

All major European initiatives and strategies related to human resources development, to employment, and to education and training have focused in the past ten years on reaching the ambitious goal of making the EU "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion"[1]. The Lisbon European Council in March 2000 recognised the important role of education as an integral part of economic and social policies, as an instrument for strengthening Europe's competitive power worldwide, and as a guarantee for ensuring the cohesion of our societies and the full development of its citizens. The development of high quality vocational education and training is a crucial and integral part of this strategy, notably in terms of promoting social inclusion, cohesion, mobility, employability and competitiveness.

Development of qualifications frameworks has been seen as a tool facilitating links between the world of education and training and the world of the labour market, preparation for life as active citizens and mobility within Europe. With the gradual enlargement of the EU, ensuring comparability and recognition of qualifications at all levels acquired in various countries has become a key issue, especially with the significant increase in the number of immigrants and the growing cultural diversity of the European Union.

Considering the wide variety of national education and training systems, the development of national qualifications frameworks that would provide systematic descriptions of the full range of qualifications within a given educational system and foster transparency and readability of qualifications, has been seen as a useful tool to facilitate recognition between national systems. The Bologna process and the Copenhagen process were the two leading initiatives for this purpose, each aiming at the development of a European meta-framework, the Qualifications Framework for the European Higher Education Area (QF-EHEA) and the European Qualifications Framework for Lifelong Learning (EQF-LLL) for vocational education and training, which could be used as translation devices to help explain how one country's education system and its qualifications compare with others. The two meta-frameworks have similarities in structure and purpose, but also differences: while both were designed to foster mobility of students and workers, including readability and recognition of qualifications, both focus on learning outcomes as core statements defining expected knowledge, understanding, skills etc. acquired by graduation of a learning process as well as on quality assurance, there are differences in their aims and the descriptors used. While the Bologna process leading to the QF-EHEA sought to harmonise European HE systems by introducing common degree structures, the EQF-LLL is intended to act as a translating device to make relationships between qualifications and different systems clearer. However, since the EQF-LLL is an overarching framework and seeks to include different forms of learning (not only learning in higher education

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but also more professional oriented qualifications), the descriptors are broader, more generic and have to be more encompassing than the Dublin descriptors applied to define the levels for the QF-EHEA.

Nevertheless, the two co-existing meta-frameworks are compatible and quite similar in goals and aims, which is highlighted by the fact that quite a number of countries chose to present both their referencing with the EQF-LLL and their self-certification of compatibility with the EHEA framework reports in the same exercise. Others, which were more advanced in the development of the national qualifications framework for higher education and presented the self-certification report first, used the opportunity provided by the referencing process to review their higher education framework and to assess its impact, such as in Ireland.

While both approaches have their pros and cons, and each country can decide whether to use the national qualifications frameworks for descriptive purposes such as facilitating communication with the labour market and the public, or for quite radical reforms of their education and training systems, the shared goals and principles of the two meta-frameworks and the changes and challenges posed by the recent social economic developments at global level have prompted decision makers across Europe to consider higher education from a lifelong learning perspective and to develop strategies and policies to turn this view into reality.

Building Bridges between EQF-LLL and QF-EHEA (HEQ_Bridges)

Financed by the European Commission through the Education, Audiovisual and Culture Executive Agency, under the Lifelong Learning Programme Call EACEA/16/08, the HEQ_Bridges project was designed to reflect current European diversity in terms of development of qualifications frameworks and to analyse both theoretical and practical approaches to relating the two European meta-frameworks and the corresponding national frameworks of qualifications, with a practical example focusing on two sectors: air transport and mechatronics.

The consortium was built based on the NQF development stage in the partner countries when the project proposal was submitted. Thus, Ireland, which initiated its NQF design and development in 1999, published a paper on the compatibility of the Irish NQF with the framework for qualifications of the European Higher Education Area in 2006 and finalised the referencing with the EQF in 2009, was included as a partner. Similarly, Malta was included as a partner because it had developed a NQF for LLL in 2005, based on the Council Recommendation and on the principle that levels of education and qualifications can be measured by what a person is capable of doing. Malta had also published a report including both the verification of compatibility with QF-EHEA and the referencing with EQF-LLL levels. Romania, the lead partner through its national authority for qualifications in higher education, had designed a methodology for the development of a NQF for HE which was approved as Ministerial Order no 4430/2009, then implemented at national level, and presented its self-certification report for public comments in April 2011 Romania. Germany, where a qualifications framework was formally adopted by the KMK (Kultusministerkonferenz) in 2004 and was passed also by the highest decision making body of the Rectors' conference was invited as a partner. The experience of these countries was used as the basis for analysis and as case studies for the other partners. The experience of France, which starting with 2002, has been developing a national qualifications register with the purpose to facilitate access to employment, human resources management and professional mobility, was considered valuable to the project. Spain, which has a National Professional Qualifications Catalogue from 2003 was invited as a partner, as well as Slovenia, which through the Higher Education Act in 2006 began the development of a HEQF and of a Regulation concerning classification of education and training. Thus, the consortium constituted for the purposes of this project was characterised first of all by a European dimension, as it comprises 10 partners from 7 countries (Romania, Germany, France, Spain, Ireland, Malta and Slovenia). The multinational character of the consortium was enhanced by the multi-actor dimension, as among the ten partners there are national authorities in the qualifications field (ACPART/ANC and Qualifications Council from Malta); universities (Université de Versailles Saint-Quentin en Yvelines, Institut Universitaire de Technologie de Rouen, Universidad de Zaragoza, Universitatea Politehnica din Bucureşti, University of Primorska Slovenia, Dublin Institute of Technology), which are concerned with the new challenge of linking HE to the lifelong learning agenda and included faculties or departments of mechatronics and aircraft engineering; a regulation authority in the air transportation field (Romanian Civil Aeronautical Authority); a vocational and further education provider (DEKRA Akademie).

This partnership reflects the reality of diversity at European level and could provide a very good example of how comparability of qualifications works among countries at very different stages in the development and implementation of their respective national qualifications frameworks, aligned with the European meta-frameworks.

Aims and Objectives

The overall objective of the project was to support the implementation and development of the EQF by developing and correlating national and sectoral qualifications frameworks and systems in relation to the EQF and strengthening the links with EHEA.

To realise this objective, partners identified several specific objectives/aims including the following:

- to develop methods and procedures for supporting the development and implementation of NQFs taking account of different types of NQF possible and appropriate by comparing their methodologies with a focus on the learning outcomes;
- to develop and apply the learning outcomes approach promoted by the EQF by exploring how this can facilitate comparison of qualifications awarded by national authorities for HE levels with qualifications issued by the air transport industry and the mechatronics sectors and enterprises at national and European level;
- to develop and produce supporting guidance tools and an international journal for qualifications frameworks in order to assist experts and stakeholders in interpreting and applying the EQF.

When setting the project objectives and goals the consortium partners started from the following identified needs: clarification and understanding of the NQFs of the seven partner countries; building NQFs based on comparable and compatible methodologies in order to make the implementation of a functional EQF by 2012 possible. To this purpose, the partners also took into account the reports published by all seven participating countries for the BFUG Stocktaking 2007, through institutions within the partnership, as well as the text of the London Communiqué of May 2007 indicating that "Qualifications frameworks are important instruments in achieving comparability and transparency within the EHEA" and that Ministers of Education from the Bologna area committed themselves to fully implementing such national qualifications frameworks, certified against the overarching Framework for Qualifications of the EHEA, by 2010. Moreover, the Recommendation of the European Parliament and the Council 2008/C 111/01 provided important ideas that are at the core of the project: use of the EQF-LLL as a reference tool for comparing the qualifications levels of the various systems, for identifying these links, and for their transparent correlation by 2010.

Activities

The methodology of the project was based on research, exchange of experience, workshops, analyses, study cases and comparative studies.

The state of art survey in the partner countries for example was undertaken building on the hypothesis that the way the Methodologies for NQFs development were, or will be, designed should start from the idea that, for NQFs to be compatible, the methodologies used to create them should be harmonised/compatible first, and that this can be achieved through a common understanding of learning outcomes.

The project also included the development of two case studies: one for qualifications in the air transport industry, which is sectorally regulated at European and international level; and the second one on qualifications from mechatronics, a highly interdisciplinary field which requires hybrid competences (electronics, mechanics, and informatics). The originality element was the design of a model for building sectoral qualifications that takes into account all stakeholders: university/ faculty – employers – regulation authority/professional association.

To increase visibility of the project and to reflect the shared interest in the qualifications field, as well as articulating the latest developments, the partners decided on the publication of a quarterly journal with the title: *European Journal of Qualifications*.

The aim of the *Journal* is to provide a forum to share information, to reflect European concerns with regards to development of EQF-LLL and QF-EHEA, as well as providing experiences and examples of good practice in the development of national qualifications frameworks.

Outcomes and Conclusions

Starting from a rather ambitious and wide perspective, the project activities generated a huge amount of valuable data which had to be carefully analysed and interpreted, so that it could be distilled in the three main reports presented briefly below, together with their conclusions:

REPORT 1: Diversity And Comparability in the Implementation Of National Qualifications Frameworks for Higher Education

This report aimed at assessing the legal and institutional context for building national qualifications frameworks in higher education in the seven countries participating in the project in order to reference them to the two European meta-references: the overarching Framework of Qualifications for Higher Education and the European Qualifications Framework for Lifelong Learning. The purpose was to outline the similarities and especially the differences in designing methodologies for the development of national qualifications frameworks and the comparability with frameworks of qualifications for higher education.

Some of its concluding remarks regarding the compatibility and diversity of the NQFs for HE in an international perspective are included below:

- *Progress has been made in the design and implementation of NQFs in Malta and Romania*

since the Stocktaking 2009. The methodologies of the two countries are in line with the EQF and OFQ for EHEA, as indicated by the National Reports presented in chapter 3.

- *The analysis of national reports does not indicate significant progress in Slovenia and Spain since the Stocktaking 2009.*
- *A very good result of EQF is the dialogue between Bologna countries on the harmonisation of qualifications and the undeniable accomplishment of a much more clear understanding of the national higher education systems. The EQF is intensifying the international cooperation.*
- *It is certain that the EQF and the NQFs represent an important link between the Bologna Process action lines and a tool with a regulatory effect.*
- *The QF is a very important tool for shifting the focus on the qualifications and the content of study programmes offered by universities and also for improving the dialogue between universities and enterprises.*
- *Most universities understood the role of the learning outcomes approach in developing modern and useful study programmes for the students of a global knowledge society. These universities practice a new governance of study programmes and competencies.*

Thus, these end remarks of the report indicate that despite the convergence intents of European and national institutions, there is a significant amount of information not only on the compatibility/convergence side of the process but also on the reverse aspect – the diversity/divergence in approaching qualifications issues in each higher education system.

REPORT 2: Comparative Assessment Of Terminology And Qualifications Framework Design

This report on Terminology & Qualifications Framework Design was intended as a tool to assist in bringing increased understanding and harmony to the qualifications landscape across Europe by identifying areas of common agreement and common usage as well as areas where there are national and sectoral differences. The report deals with three particular dimensions: concepts and terminology, framework design, and recognition of non-formal and informal learning.

This lead to a set of ten concerns raised by the authors, rather than conclusions, all the more interesting as they represent food for thought in a very complex endeavour which could hardly produce definitive solutions and/or conclusions:

- *Concern 1: Competing framework level descriptors*

A concern here is that in some places universities and other higher education providers are using the Dublin Descriptors to describe programme learning, others are using national frameworks, and yet others are using the EQF-LLL descriptors. While each set of descriptors works for its own purposes, it is difficult to fully articulate a clear and credible 'bridge' to compare qualifications written to different models without the exercise becoming mainly one of semantics and terminology. When a holder of an award applies to a national agency for a determination of framework level it may not be a useful exercise in reality.

- *Concern 2: Generic or specific learning outcomes*

Again, some framework indicators are very general such as the Dublin Descriptors. Work on the Tuning project is uncovering the difficulty of moving from these generic learning outcomes to actual programmes and learning sectors.

Likewise the requirement of some NQFs that each learning outcome element is included in an award is useful on a broad level, but quite difficult when it comes down to precise curriculum design that is both sustainable and flexible.

- *Concern 3: 'Qualifications' frameworks or 'credit' frameworks?*

There is now a clear division between NQFs which describe awards only, and NQFs which have a facility to consider credit for learning achieved outside of formal programmes or named awards.

This is now a realworld mobility problem where holders of 'credits' seek to have those credits recognised in relation to awarding institutions which had no involvement in the award of those credits.

- *Concern 4: National frameworks before meta-frameworks*

The design of two quite different meta-frameworks in Europe before most countries have NQFs is posing challenges for states which are at the early stage of NQF development. Simply using framework level numbers to illustrate 'bridges' is not useful when the deeper conceptual and operational issue have to be managed.

- *Concern 5: 'Stateless' qualifications: a parallel universe?*

It is increasingly obvious that professional and occupational sectors which operate across borders are developing their own approach to relationships with NQFs and meta-frameworks. This is the case in engineering, nursing, architecture etc. The reality is that many sectoral qualifications frameworks sit comfortably alongside NQFs. But when those frameworks move

across a border to another state they move to another NQF and another set of relationships. So, is it simply a matter of mutual recognition, or does a 'stateless' qualification need to be measured and quality assured across all borders?

- *Concern 6: 'Qualification' or 'qualified to practice'?*

Again, there are tensions in the expectation that a qualification on a framework represents a qualification to practice and the reality of the labour market. It is still the case that a qualification to practice is likely to be controlled by a regulatory or professional body which may or may not have its 'qualifications' placed on a framework. In such cases placement on a framework is not hugely significant for the particular profession or regulatory body.

- *Concern 7: Naming of awards and qualifications*

The Bologna framework has established the primacy of the three main higher education cycles: bachelor, master, doctorate. However, there are NQFs were the primacy of university-type higher education is not a given, such as in Wales. The NQF for Wales clearly gives equal esteem to industry/continuing and professional development learning, spanning the levels from entry level to doctorate. This conceptualisation is clearly useful for 'stateless' qualifications and for learning in working life. However is difficult to understand the addition of another type of learning – 'work-based learning' - which only goes to Level 4 but which is in the area of higher education and further education. Using five divisions for learning is perhaps useful, perhaps not.

- *Concern 8: Major and minor awards for progression*

A particular challenge for NQFs is to bring coherence to all the minor awards in a state, to name them coherently, and to place them on levels in a sustainable relationship both with major awards and with each other. Attaching ECVET or ECTS credit values to them is another challenge.

- *With regard to bridging frameworks, there is a particular role for minor awards, and a number of occupational and professional bodies have worked out quite well how to do it – as illustrated in the professional sector case studies inRreport 3 for the HEQ_Bridges project.*

- *Concern 9: Various meanings for 'sector'*

The term 'sector' is a useful one, but one which holds many assumptions.

In some framework policy documents it is assumed it means 'university' sector, 'VET' sector, etc. In others it refers to 'occupational' sectors.

In the Background paper for the Belgian EU Presidency: 'Towards a quality assured and integrated life-long learning implementation strategy' the sub-sectors of education and training are clearly identified as:

- *general education;*
- *vocational education and training (VET);*
- *higher education;*
- *adult education and training.*

In terms of framework development and bridges across frameworks it is difficult to see how adding the new nomenclature of 'adult education and training' is helpful.

- *Concern 10: VET credits and ECTS credits*

For practitioners it is difficult to see how two credit systems can work efficiently across an entire framework and how there can be useful exchange of credits that have different values. Two systems can work where the framework is static, with a clear distinction between VET and higher education. However, it clear that static frameworks are not being developed by all countries and that a system of credits which has multiple applications needs to be developed.

REPORT 3: Case Studies in Sectoral Qualifications: Qualifications Provision, Job Descriptions, Learning Outcomes and Framework Placement

This report continued and particularised the data gathering and analysis processes employed to build up the theoretical construct of the two-fold task of developing the three reports: while the second report, described above, focused on definitions, concepts and terminology, this third report focuses on the practical side, by means of a comparison of sectoral qualifications in two interdisciplinary fields, air transport and mechatronics, narrowed down to four sectors: air traffic control; airport management; supply chain management/ logistics; and mechatronics.

Using as reference the format of the comparative assessment of terminology and framework design, the partners involved used case studies to compare qualifications, titles awarded, learning outcomes, and learning paths in the two sectors, chosen because of their complexity, as they request hybrid competences, multidisciplinary, multinational working and learning environment, and involve regulated occupations. A common interview questionnaire tools was used to gather data from both professional experts and from academic experts in the four sectoral areas. Document analysis was also used to identify the minutiae of the learning outcomes approach used in each case study. To strengthen the analysis of sectoral qualifications methodologies, a study visit was arranged to Eurocontrol, Luxembourg, to describe and analyse the details of air traffic control qualifications based on competence standards and learning outcomes.

Some of the conclusions reached by the authors of the analytical report include the following:

- *Research data for the four sectors (air traffic control; airport management; supply chain management/logistics; and mechatronics), indicate that the understanding and usage of qualifications and awards frameworks has proceeded very rapidly over a few short years. In fact, it could be argued that professional and occupational sectors grasped the possibilities of qualifications frameworks for themselves quicker than did the formal education sector.*
- *It could also be argued that the development of professional pathways, with clearly defined levels of learning and curriculum content in professional human resource management terms, has made more efficient and relevant use of frameworks and their technologies that one would have expected.*
- *It is clear that some sectors are very familiar with their NQF and less familiar with the EQF or the Dublin Descriptors.*
- *Other sectors may need more cross-border, stateless, frameworks, such as the transport and logistics sector and indeed air traffic control. It is not unexpected in these cases that sectors would wish to keep control of their training systems and to stay away from higher education frameworks for now. Whether this represents an issue or concern will depend on the reader's point of view and involvement in the world of qualifications, HRM and training.*

European Journal of Qualifications

The Journal was intended as an effective dissemination tool to inform a range of potentially interested readers in knowing more about developments related to building qualifications frameworks, and familiarising them with the endeavours and progress made to reach common grounds for the European framework for Lifelong Learning and the overarching framework for qualifications in the EHEA.

The five issues published during the project implementation period brought together a variety of views, issues and developments, highlighting both good practice examples and concerns raised by authors from a variety of countries exceeding the project partnership: Romania, Ireland, Spain, France, Germany, Austria, Malta, Scotland, Greece, and Slovenia.

The Journal contributed to ensuring the visibility of the project and to raising awareness of the project activities and results. Its publication will continue beyond the HEQ_Bridges project, as part of the activities undertaken by ANC in its capacity as EQF National Coordination Point.

Conclusions

Part of the added value embedded in the project outcomes is that they provided both snapshots of the current situation with regard to the development of qualifications frameworks in Europe as well as analysis and interpretation of a huge amount of data to provide a conceptual framework and its applicability in practice. The three project reports also provided recommendations concerning the possibility to develop the process of recognition of non-formal and informal learning and of the experience and competences accumulated after acquiring the Bachelor degree, through the LLL process.

An important goal of the project, as illustrated by its very title, was to identify means to ensure the development of the role of higher education in the LLL process supported by the EQF. One important sustainability component in this regard was the creation of a network of national agencies/departments/authorities responsible for HE qualifications development in the partners countries, which are likely to continue dialogue and joint actions into the future.

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PREPARATION OF PAPERS IN TWO COLUMNS FORMAT FOR THE EUROPEAN JOURNAL OF QUALIFICATIONS FRAMEWORKS

John SMITH[1], Daniel DEAN[2], Michelle BROWN

Abstract *— All full papers must include an Abstract. The Abstract and Key words text should be 10 pt. Times New Roman italic, full justified and contained without one paragraph. Begin the Abstract with the word Abstract - in Times New Roman italic Bold text, only the word Abstract should be bold. Do not indent. Use a long dash after the words "Abstract" and "Index Terms". Do not cite references in the abstract. The abstract should be maximum 15 rows. The abstract has to be in English.*

Key words *— About four, alphabetical order, key words or phrases, separated by commas.*

PAGE LAYOUT

These instructions serve as a template for Microsoft Word, and give you the basic guidelines for preparing camera-ready papers for the European Journal of Qualifications Framework, published inside of the HEQ_Bridges project. Please follow the instructions provided in this format to ensure legibility and uniformity. The guidelines are designed to reduce the amount of white space and maximize the amount of text that can be placed on one page.

We suggest you just use this document as your guide and simply cut and paste your text over the material in this document.

All full papers must follow the following layout:

- A4 paper size
- Portrait Orientation
- 2 column format for the body of the document
- Top margins: 2,5 cm
- Bottom margins: 2,5 cm
- Left margins: 2,5 cm
- Right margins: 2,0 cm
- Indents - first paragraph of section - none
- Indents - all other paragraphs – 0,63 cm

If you are using Word, set the margin widths and paper size by selecting the "File" menu and select "Page Setup". Select the above options, make sure you also apply to "Whole document".

- While formatting your document, make sure you use consistent use of punctuation marks and spelling. Set the language option to British English.

PAPER TITLE AND AUTHOR DATA

The title and author data is in one column format, while the rest of the paper is in two column format.

Please follow the following style guide.

- **Paper title:** This information should l placed at the top of the first page in 12 poi Times New Roman in Uppercase, bold, ar centered.
- **Author data:** 12 pt. Times New Roma italic, right centred, the family name of tl author with UPPERCASE, and the first nan in front of this in Small Caps. Insert a blar line between the Title and the Author listir and between the Author listing and the boc of the paper.

Information for each author such as department college or university will be listed as footnote, left centre Times New Roman, 9 pt.

PAPER BODY FORMAT

The following Information is for a "Full Paper".

Font and Spacing Instructions

Use the full justify option for your columns. Use tv columns in all pages. The two columns must always exhil equal lengths and you should try to fill your last page much as possible. Use one line of space between text a section headings. Use one line of space between text a captions, equations, tables and footnote. Use automat check spelling. Do not use hyphenation. Please use t following Font and alignment instructions:

- **Body text**: 10 pt. Times New Roman, full justifie single space, no blank lines between the paragrap Indents - first paragraph of section - none (this style defined under the style menu of this document as "Fi Paragraph"), Indent - all other paragraphs – 0,63 c (this style is defined under the style menu of th document as "Body Text"). Follow the exampl shown in this document. The article must not exce 10 pages (5000 words).
- **Section Headings:** 12 pt. Times New Roman, bol centered, use Small Caps, leave one blank line abo and below.
- **Section Sub-headings:** 10 pt. Times New Roma bold, centered, leave one blank line above and belo **Bullets:** 10 pt. Times New Roman, the bullet should left justified and indent the text 0,63 cm. Insert a bla

[1] John SMITH, University of Applied Sciences
[2] Daniel DEAN, University of Agriculture
[3] Michel BROWN, Technical University

line after the bullet list but not before, follow the examples in this document.

FIGURES AND TABLES

All figures and tables must fit either 1 or 2 column width. It is suggested that you use one column whenever possible. To make the paper read easier you may want to position any table or figure that requires one column either at the bottom of the page or the top of a new page.

Do not abbreviate "Table"; use Roman numerals to number tables Use the following format guidelines for Figures and Tables:

- **Figure and Table headings:** 10 point Times New Roman UPPERCASE, centered; place below the figure and above the Table.
- Leave one blank line above and below each Table or Figure.
- **Figure and Table captions:** 9 pt. Times New Roman, Small Caps, centered; italic, it place below the figure or table headings.

Table I and Figure 1 give examples of the Table and Figure formatting. Avoid placing figures and tables before their first mention in the text. When inserting figures or tables be sure you insert the figure and not just a link to the figure. The best way to make sure you are doing this correctly is to save your paper to a floppy disk then open the file on a different machine and make sure all your figures are correct. If you insert the link instead of the figure or table, a box with a big red x will appear in the location where the table or figure is supposed to be located.

TABLE I
POINT SIZES AND TYPE STYLES

Points	Place of Text	Type Styles
10	Table number	ROMAN NUMERALS
10	Figure and Table Headings	UPPERCASE
9	Figure and Table Captions	SMALL CAPS
9	Reference list	
10	Abstract and Key words	Bold
12	Section Titles	Italics
10	Main Text and Equations	SMALL CAPS, BOLD
10	Subheadings	
12	Authors' names	Bold
14	Title	Italics UPPERCASE, Bold

FIGURE. 1
OLD LOGO

ACKNOWLEDGEMENT

If any, place before the references.

REFERENCES

Place references in separate section at the end of the document, do not footnote references. Refer simply to the reference number, as [3] or [5]-[8]. Do not use "Ref. [3]" or "reference [3]" except at the beginning of sentence: "Reference [3] shows….". Provide up to five authors' names; replace the others by "*et al*." Do not put figures or anything else after the references.

- **Reference text**: 8 pt. Times New Roman, full justified, no space between the references (this style is defined under the style menu of this document as "References")
- Use box numbers with square brackets [ ] within text. Do not use superscripts or subscripts. Do not use ( ) for references, since these are used to refer to equations.

Use the following as the guide for references:

[1] Author's Last name, First initial, Middle initial, "Title", *Journal or book (italics),* Vol, No #., date, pp.

[2] Author's Last name, First initial, Middle initial, "Title", *Journal or book (italics),* Vol, No #., date, pp.

[3] Author´s Last name, ….

PRESENTATION OF THE AUTHORS

A presentation of the authors must be mentioned at the end of the article and must not exceed 10 lignes. Times New Roman, 12 points, Italic, right centred.

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