

# Request e-abilities to labour market

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**Abstract.** The 35 percents of EU total population uses the advanced Internet services. This rate is very low and has to increase in the next years, because the employed person needs ICT user skills. The digital literacy knowledge getting is very important. Taking part in organized courses and training can be helped to increase the digital literacy and ICT users' skills. Nowadays, the importance of e-skills and e-learning is growing rapidly, partly due to the information and communication technologies in the information / knowledge-based society to evolve. The aim is to enable the knowledge and skills to help the individual can be an active member of society, teamwork, motivation and possess the skills necessary to find place in the labour market.

**Keywords:** e-Skills, e-Learning, digital literacy, labour market, education.

## 1 Introduction

The European Union needs to ensure that the knowledge, skills, competence and creativity of the European workforce - including its ICT practitioners - meet the highest global standard and are constantly updated in a process of effective lifelong learning.

The European Commission adopted in September 2007 a Communication on “e-Skills for the 21<sup>st</sup> Century” presenting a long term e-skills agenda for Europe and including key action lines at EU level. The Competitiveness Council of Ministers welcomed this Communication and adopted Conclusions on a long term e-skills strategy at its meeting on 22-23 November 2007. Stakeholders also welcomed this initiative and have established the e-Skills Industry Leadership Board to contribute to implementing the strategy.

To take full advantage of the strategic and operational opportunities offered by information and communication technologies (ICT), it is clear that more and better qualified ICT practitioners as well as e-skilled managers and citizens are needed (Brixiova et al., 2009).

The e-skills strategy has progressed with several visible achievements and the European e-Skills Conference which took place on November 2009 in Brussels

delivered some welcome messages of encouragement in today's challenging times. Europe is increasingly developing its human capital to be globally competitive and is making significant progress towards the important goal of implementing a long-term e-skills strategy.

It is necessary to continue to work at providing a rich science and technology environment and the availability of a breadth and depth of skilled labour force performing well in the latest technologies.

E-skills are a central aspect of European policies to boost competitiveness, productivity and employability of the workforce. Europe needs to ensure that the workforce's knowledge, skills, competences and inventiveness - including but not limited to ICT professionals - meet the highest global standards and that they are constantly updated in a process of effective lifelong learning.

This consensus on the importance of e-skills in Europe is in line with the work of the European e-Skills Forum and the November 2006 report of the ICT Task Force, the European Commission's September 2007 Communication on "e-Skills for the 21st Century: Fostering Competitiveness, Growth and Jobs", and the November 2007 Competitiveness Council Conclusions on "A Long-Term Strategy for e-Skills".

## **2 e-Inclusion and Digital Literacy**

Digital literacy is the skills required to achieve digital competence, the confident and critical use of ICT for work, leisure, learning and communication. Digital literacy is underpinned by basic technical use of computers and the Internet.

In response, EU Member States meeting at Riga in 2006 agreed on a series of e-Inclusion targets, including reducing by half the gap between digital literacy levels of disadvantaged groups and the average for the EU by 2010.

470 digital literacy initiatives across the EU were analysed together with the results of the digital literacy. The main conclusions are:

- Member States have invested in large digital literacy programmes over the last ten years as part of their Lisbon priorities for information society and as a result regular Internet use has grown rapidly, particularly among young persons for who skill levels and usage rates exceed that of the USA.
- Digital literacy remains a major challenge and more efforts need to be dedicated to supporting disadvantaged groups, in particular those over 55.
- There is evidence that secondary digital divides may be emerging in relation to quality of use and more needs to be done to increase the levels of confidence and trust in online transactions and the use of ICT for lifelong learning for all.

Digital Literacy is one of the most important but also challenging areas to achieve an information society for all. Despite its inclusive effects, the information society has also created new divides. The knowledge society is becoming ubiquitous with more everyday activities, goods and services available electronically and, increasingly, only available online. Digital Literacy is increasingly becoming an essential life competence and the inability to access or use ICT has effectively become a barrier to social integration and personal development. Those without sufficient ICT skills are

disadvantaged in the labour market and have less access to information to empower themselves as consumers, or as citizens saving time and money in offline activities and using online public services.

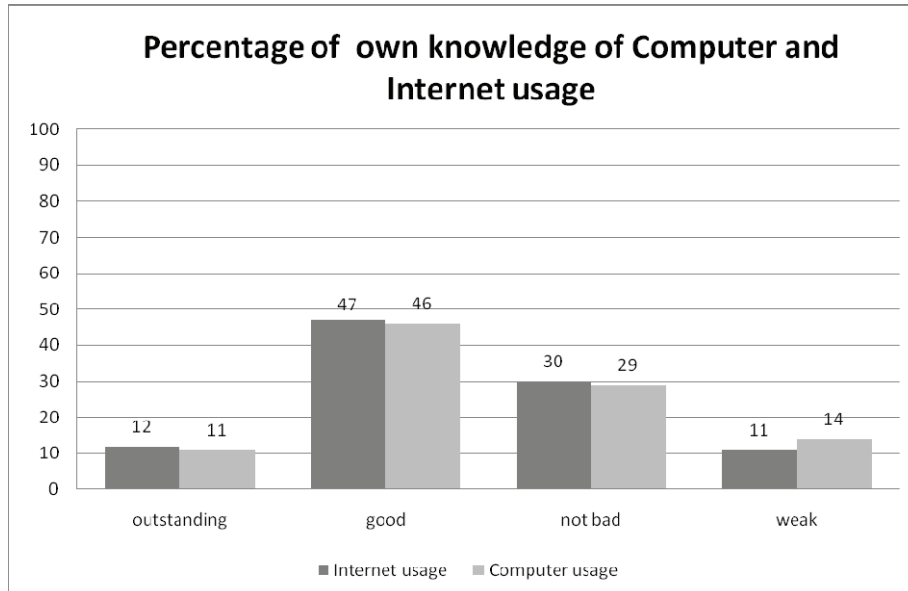
The i2010 Annual Report in 2007 found that 40% of the EU population have no Internet skills but higher percentages are to be seen in older age groups, people outside the labour force and those with a low level of education. Since 2000, the European Union has stepped up its activities to improve e-Learning and to develop skills. The e-Europe Action Plan put eLearning and e-Skills high on the political agenda and led to the e-Learning Programme, which directly promoted Digital Literacy. This has continued under the renewed Lisbon Agenda, which highlights Digital Literacy as a key area for policy intervention.

The Table 1. shows the EU-27 countries in the rank of the persons, who employed with ICT users skills. Here can be seen, Hungary 7<sup>th</sup> in the rank, so it takes clear, why so important at first level the digital literacy and at second level the higher knowledge of ICT. Nowadays, without these abilities is not easy to get qualified jobs in Europe as well as Hungary.

**Table 1:** Percentage of persons employed with ICT user skills (EU-27) (2008)  
Source (Eurostat)

Ranking	Country	%	Ranking	Country	%
1.	Luxembourg	29,1%	15.	Cyprus	18,9%
2.	United Kingdom	25,2%	16.	Belgium	18,8%
3.	Lithuania	23,4%	17.	Germany	18,3%
4.	Denmark	22,8%	18.	Czech Republic	18,3%
5.	Malta	22,4%	19.	France	17,8%
6.	Latvia	21,3%	20.	Austria	17,5%
<b>7.</b>	<b>Hungary</b>	<b>20,9%</b>	21.	Spain	16,0%
8.	Sweden	20,0%	22.	Slovakia	15,9%
9.	Finland	20,0%	23.	Poland	15,4%
10.	The Netherlands	20,0%	24.	Greece	12,9%
11.	Slovenia	19,6%	25.	Bulgaria	12,1%
12.	Italy	19,4%	26.	Portugal	11,8%
13.	Ireland	19,2%	27.	Romania	9,8%
14.	Estonia	18,9%			

How is the Digital Literacy measured? The most obvious way to measure the digital literacy, ask the users to evaluate their own knowledge. In the World Internet Project evaluation (Internet1) - which made in every two years - did not find a significant disparity between the evaluation of average internet usage knowledge and that of computer usage. In both cases, most people thought that their knowledge is good. Approximately every tenth person surveyed characterized their knowledge is outstanding and in a similar proportion of users thought their knowledge is weak.



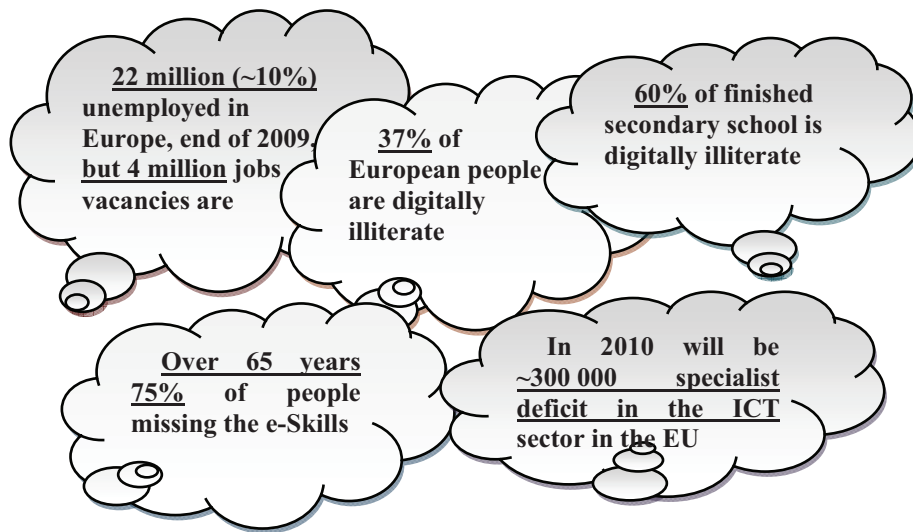
**Fig 1.** Percentage of own knowledge of Computer and Internet usage  
Source: (World Internet Project - 2007)

### 3 e-Skills in Europe

The growth of ICT has always been marked by fluctuations of activity and there has been an element of boom and bust. It is estimated that there are 4.2 million ICT practitioners within the EU and that approximately 180 million people are using ICT at work (Cepis, 2007). A study on the supply and demand of e-skills (Rand Europe, 2005) over the period 1998-2004 reported an increase in the estimated number of employed IT practitioners during this period of about 48%. After a peak in 2001 a low point was reached in 2003. There is some evidence of a cycle, and the European e-Skills Forum warned that significant e-skills gaps will again appear and called for the preparation of a long-term e-skills agenda. A 2005 industry report predicted that there would be a shortage in 2008, across Europe, of up to half a million people with advanced networking technology skills (IDC White Paper, 2005). A sectoral survey on e-business in 2006 reported that enterprises are anticipating skills shortfalls for ICT practitioners, particularly in ICT strategy, security and new business solutions (E-Business Watch Survey, 2006).

Shortages of ICT practitioner skills have been endemic due to technological innovation and the fast growth of ICT activity in comparison with the relatively low supply and availability of new employees and entrepreneurs with relevant educational qualifications. This was observed in particular with the uptake of the Internet. In response to industry pressure several Member States launched policy initiatives in the late nineties and at EU level a conference on the e-Economy was

organised in March 2001. The bursting of the dotcom bubble and the recession of 2001 adversely affected investment in ICT and reduced temporarily the demand for ICT practitioners. Several industry-led initiatives were terminated while political interest and support decreased rapidly. Now e-skills shortages are increasing. The e-skills issue received attention from policy makers in peak times when the ICT sector was booming but suffered a loss of interest in difficult periods. This must alter if Europe is to anticipate and manage change effectively.



**Fig 2.** Some European data about e-Skills and digital illiteracy (Source: Eurostat)

The European e-Skills Forum identified solutions bringing added-value at EU level, but these have so far not been implemented. For example, developing and retaining skills required for business success is a necessity to ensure that enterprises have employees with the right skills in the right jobs at the right time. For this purpose, many of them are developing ICT competence catalogues, processes, tools and strategies.

Several sources report a deterioration of the image of the ICT sector and ICT work, which is reflected in the decline in the number of students starting ICT courses. Adding to the concerns related to the demographic decline, young people seem less and less interested in studying mathematics, sciences and technology, and the gender issue still remains. There is a need to communicate better with the public, especially young people, parents, teachers and women, and to adopt measures to facilitate the adaptation of the workforce.

The traditional notion of literacy needs to embrace the complete set of e-skills and media competences required in a knowledge-based economy and society. Eurostat figure (Eurostat, 2006) indicate that 37% of the EU population has no computer skills whatsoever and that more than 60% of people not educated beyond lower secondary level have no basic e-skills. A lack of e-skills will prevent these people from using e-commerce and e-government applications and participating fully

in the information society. Furthermore, the lack of e-skills exacerbates social and educational disadvantages, inhibiting lifelong learning and up-skilling.

#### 4 e-skills in the Hungarian agriculture

I analysed farmers' situation – with regard to information circulation – just in connection with government because growers must be in contact with members of this sector.

A sort of information systems are at work by all members in the government sector; these systems common attribution are to collect, analyse, store, retrieve and forward information about economic participant so help the government in decision making (Heteyi, 2002). Several administrative studies have revealed that client associations are primary among areas which should be converted into electronic processes. The supplier character demands that office provides communication channel for clients in an easily practicable way.

Many experts claim, that in the operation of public administration the use of information technologies may cause fundamental change, because electronic administration may evolve. Nowadays the judgement of opportunities of e-democracy is not clear. On the one hand, one part of people regards e-democracy as the solution of all problems on the other hand others look it as a future dream. The main argument of oppositions is that e-administration generates digital gap in the society due to its costly appliances (PC) and the relative high demand of knowledge (PC and internet use) (Buday and Tózsza, 2007).

Figure 3. represents why farmers, who have own internet access, use internet browser. In the course of browse almost everybody searches for information and at least half of them use it in reference to market research or services of e-government and bank.

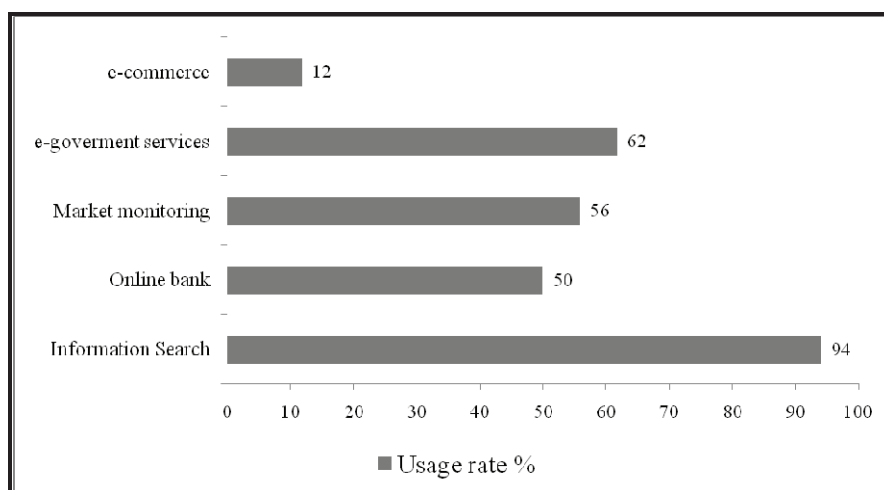


Fig.3. The purpose of web-browsing by private farmers who have own Internet access, 2010

With the help of my questionnaire, we can see (Figure 4.) what measure private farmers visit web sites of government and public administration. Web sites of the Ministry of Rural Development, Agricultural and Rural Development Agency (ARDA) and Agricultural Administration Office (AAO) are visited because of actual laws and regulations. On the web site of ARDA we can find training assistances related to electronically submission of the application form.

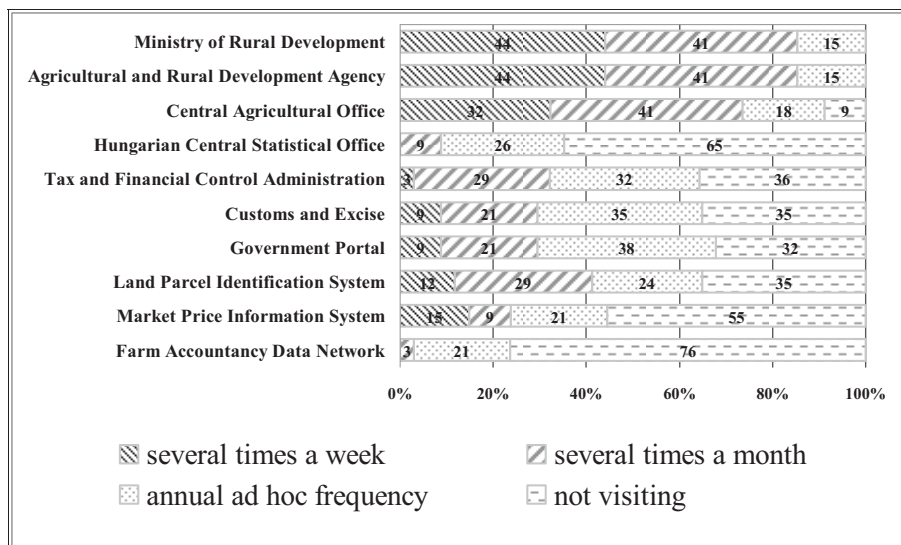


Fig.4. Attendance of web sites of government and public administration offices by private farmers, 2010

On the governmental web pages located the client gate which helps for citizens to arrange their administrative, official proceedings and attain services related to them. After registration online users are able to use electronic governmental services with the help of client gate.

The cause of less attendance of Market Price Information System may be that respondents are mainly plant growers. But the system is much more important and useful those farmers who produce fresh, easily deteriorating foods (e.g. fruit, milk, egg, meat) so the measure of attendance is higher by them.

## 5 “e-Migrations” in Europe

The development and recognition of citizens' knowledge, skills and competence are crucial for the development of individuals, competitiveness, employment and social cohesion in the Community. Such development and recognition should facilitate transnational mobility for workers and learners and contribute to meeting the requirements of supply and demand in the European labour market. Access to and participation in lifelong learning for all, including disadvantaged people, and the use

of qualifications should therefore be promoted and improved at national and Community level.

The Lisbon European Council in 2000 concluded that increased transparency of qualifications should be one of the main components necessary to adapt education and training systems in the Community to the demands of the knowledge society.

The Council Resolution of June 2002 on lifelong learning invited the Commission, in close cooperation with the Council and Member States, to develop a framework for the recognition of qualifications for both education and training, building on the achievements of the Bologna process and promoting similar action in the area of vocational training.

The objective of the directive of 2005 of the European Parliament is to create a common reference framework which should serve as a translation device between different qualifications systems and their levels, whether for general and higher education (Dill, 2010) or for vocational education and training. This will improve the transparency, comparability and portability of citizens' qualifications issued in accordance with the practice in the different Member States. Each level of qualification should, in principle, be attainable by way of a variety of educational and career paths. The European Qualifications Framework (Young, 2010) should, moreover, enable international sectoral organisations to relate their qualifications systems to a common European reference point and thus show the relationship between international sectoral qualifications and national qualifications systems. This recommendation therefore contributes to the wider objectives of promoting lifelong learning and increasing the employability, mobility and social integration of workers and learners. Transparent quality assurance principles and information exchange will support its implementation, by helping to build mutual trust.

## **6 Projects relating to e-abilities**

We are taking part two European projects. One of them is the Socrates Grundtvig program (NODES) with 6 partners, which deals with adult training / lifelong learning in order to facilitate competitiveness, employability and mobility of adults who are victims of the digital divide, the second one is the ImpAQ, where process in the Lifelong Learning Transversal Program with 9 partners, which deals with definition of EQF for the Agricultural sector.

### **6.1 NODES**

They are taking part 6 countries in the Socrates Grundtvig project. The NODES project aims at promoting the use, in adult training / lifelong learning, of multimedia knowledge, in order to facilitate competitiveness, employability and mobility of adults who are victims of the digital divide or of some of its components such as distance, initial level of knowledge, language and use of complex technologies. There are three target groups: the people victims of physical and sensorial handicaps, the victims of digital divides and/or of a social handicap, the rural inhabitants



(distance handicap). Lots of these people often have several handicaps: geographical and social isolation, handicap and digital divide. This is why the NODES device proposes to reach these target groups through the intermediary institutions and their networks. Each partner-country will associate one specific test group, for whom the follow up will be integrated to the project.

One type of the target groups of the NODES project is group of farmers who are living in rural areas. They are victim of digital gap because of lack of knowledge in using computers and lack of broad band Internet connection. 32 percent of farmers has computer and 28% of farmers use the Internet in Hungary. This rate is very low compare to other sectors. That is why the Hungarian National Rural Development Plan for 2007-2013 periods contains actions for developing the computer usage skills and developing Internet accessibility in rural areas and developing extension services and activity. In the NODES project we would like to create an open system for e-Learning and provide training for using this technology and provide a service for content development and distribution for farmers.

In the framework of the National Rural Development Plan 2004-2006 carried out 400 consultants for public-benefit advisory tasks. From among the civil servants of the Ministry's Agricultural Offices in the counties the village agri-economist experts (650) – related to their public administration tasks, also supply farmers with general information and advice. The aim is to increase the number of farmers making use of the special advisory services by 35.000 in the years between 2007 and 2013.

Relating to this aims the Hungarian partner of NODES project organized NODES training for village agri-economist experts. The numbers of participants were 21 village agri-economist experts from Hajdú-Bihar county (neighbourhood of Debrecen). It is important, because they can be potentially tutors of the farmers. Their tasks are the training of the farmers by distance learning using the modern information and communication technology (e -Learning).

## **6.2 ImpAQ project**

Qualifications of agricultural sector in EU have a common base but show significant geographical characteristics, reflected in the composition of the Learning outcomes and hence in their comparability, that could result partly critical. ImpAQ project considers these qualifications by identifying/analyzing the main specific issues to be addressed for relating them to the EQF and providing solutions, according to the best fit criterion.

Sample Qualifications Inventory describes the qualifications issued in the partner countries, related to the EQF levels through the analysis of their Learning outcomes which will help understand what the quota of common Learning outcomes is for the Qualifications comparable at the same level and the quota of specific Learning outcomes related to territorial specific features.

Range of issues and scenarios of possible solutions organized on different pillars of analysis: referencing process, quality assurance, recognition of non-formal/informal learning, recognition of credits, etc.

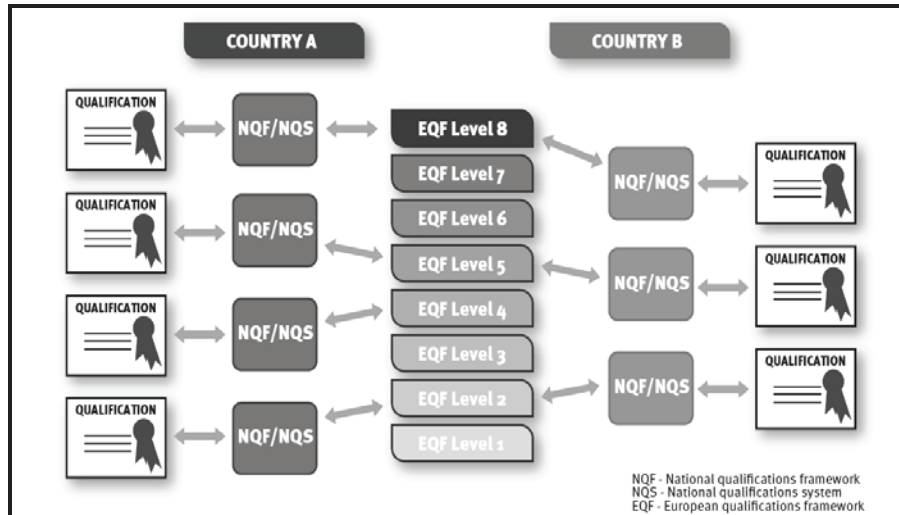
The project impact concerns the implementation of EU qualifications comparison in agricultural sector with the Learning outcomes approach to contribute to gain the

EQF goals. The increased comparability/portability of qualifications will bear a consistent interpretation/approval across systems, sectors, countries. In a long term the VET actors involved in the certifications could consider these criteria to promote qualifications more and more comparable at EU level. Besides, if the EU Qualifications/Inventory of Agriculture at sectoral level turns out to be the best way to describe comparable qualifications, this process will be started at institutional/EU level. EU citizens also benefit from the project: promotion of students/workers mobility thanks to EU shared qualifications; recognition/validation of informal/nonformal learning.

### **6.2.1 Aims and objectives of the project**

ImpAQ aims to compare the Qualifications related to the Agricultural sector, by identifying and analyzing the main issues to be addressed with the purpose of connecting them to the EQF and focusing on the best resolving approaches, following the "best fit" criterion. ImpAQ specific objectives are:

- Make a comparative analysis of the use of the Learning Outcomes approach to describe the agriculture related Qualifications issued in the partner countries. The partners adopting the research hypothesis and the defined investigation model will carry out an analysis of their own national context and will compare the results, verifying the presence or absence of quota of comparable Learning outcomes units.
- Develop guidelines to implement the referencing process by comparing the results of the envisaged comparison/ in use in the respective countries and those reached by using only the Learning Outcome - Learning outcomes approach.
- Indicate applicative hypothesis of the different models of the macroscopic, microscopic (in function of the country's having or not a NQF) (Figure 5.) or combined referencing process confronting the problems and the adopted solutions for the management of the two processes.
- Establish guidelines to increase the coherence of the Qualifications Systems (regional, national and sectorial) by using the best practices analyzed.
- Establish guidelines to coherently achieve the referencing at different levels, in function of the present contextual characteristics, by involving the different target groups of the partner countries.
- Produce a synthesis framework which collects precise indications regarding the characteristics of the created NQF and the related construction process, and which specifies operational indications to be submitted to the competent Authorities in the partner countries.



**Fig 5.** Referencing National Qualifications Frameworks (NQF) to the EQF  
(Source: EQF Newsletter (April 2010))

The used acronyms are the followings in the Figure 5:

NQF: National Qualifications Framework

NQS: National Qualifications System

EQF: European National Qualifications Framework

Our aims to compare the Qualifications related to the Agricultural sector, by identifying and analyzing the main issues to be addressed with the purpose of connecting them to the EQF and focusing on the best resolving approaches following the "best fit" criterion.

## Conclusion

The 35 percents of EU total population uses the advanced Internet services. This rate is very low and has to increase in the next years, because the employed person needs ICT user skills. The digital literacy knowledge getting is very important. Taking part in organized courses and training can be helped to increase the digital literacy and ICT users' skills. Nowadays, the importance of e-skills and e-learning is growing rapidly, partly due to the information and communication technologies in the information / knowledge-based society to evolve. The aim is to enable the knowledge and skills to help the individual can be an active member of society, teamwork, motivation and possess the skills necessary to find place in the labour market.

We are taking part a Lifelong Learning Transversal Program with 9 partners, which deals with definition of EQF for the Agricultural sector. The name of this project is: Implement Agriculture Qualification (ImpAQ). This is not easy task, because the agriculture includes several sectors.

ImpAQ aims to compare the Qualifications related to the Agricultural sector, by identifying and analyzing the main issues to be addressed with the purpose of connecting them to the EQF and focusing on the best resolving approaches following the "best fit" criterion.

Earlier work in this area was the NODES project in the Socrates Grundtvig program.

## Acknowledgement

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