e-Skills Competences [1]

Vocational Education and Training: The Call for Multi-Stakeholder Partnerships

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1. INTRODUCTION

Every economy has a driving force. The agricultural economy relied on land, while the industrial economy leveraged machines. Two critical commodities anchor the knowledge economy of the 21st century: people and knowledge. [3]

Several important surveys, studies and white papers produced in the past few years have highlighted the growing importance of the knowledge-based economy for 21st century growth, prosperity and political stability. Many of them have been produced in the context of the European Union's Lisbon Agenda, re-launched in 2005 with even more emphasis on the key role of Information and Communication Technology (ICT) to European growth and competitiveness, and a heightened sense of urgency in matching skills to emerging and changing technology, and to job specifications.

In its 2004 paper [4], CompTIA cited the statement above, and also quoted from the World Bank that "creating and exploiting ideas are the primary means to prosperity in today's knowledge-based economy" observing that people are the critical commodity of the 21st century.

Moreover, another World Bank survey declared that people must be able and willing to produce, create, and use knowledge, as well as interact with a continuously changing information infrastructure to facilitate the effective gathering, communication, dissemination and processing of information. [5]

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[3] ASTD (American Society for Training & Development) Public Policy Council (2003), in : CompTIA, *The Situation and the Role of E-Skills Industry Certification in Europe*, prepared on behalf of the eSkills Certifications Consortium, for the European e-Skills Conference, September 2004, Thessalonica, Greece, p 10, see: http://www.e-scc.org/docs/e-Skills_report_Thessalonika_2004.pdf
[4] CompTIA, ref. 3, p. 10
[5] CompTIA, ref. 3, p. 10

The Need for Continuous Education

These new and unprecedented demands on people have far-reaching implications for education and training, and place a premium on life-long learning.

Members of the Working Group on Skills and Employability of the European Commission's Taskforce on ICT Competitiveness and ICT Up-take remind us that even non-ICT related professions require a basic level of ICT-skills at a minimum, and say that "innovation and ICT uptake in Europe are thus highly dependent on the e-skills of the workforce." [6]

The Working Group goes on to say that "where knowledge becomes the main value driver for the business and the key to be employable over the duration of a working life, technology enabled learning (e-learning) can significantly contribute to lifelong learning and make it a reality." [7]

But if we acknowledge that e-competences have become almost essential tools for life-long learning, we must also acknowledge that life-long learning is essential for e-skills competence-building and certification, as businesses "face the need to respond to the shortening of the technology life-cycles in ICT and the accompanying obsolescence of related knowledge, skills and competences of their employees." [8]

Multi-Stakeholder Partnerships — One Solution

The private sector has already developed schemes that allow transferability of skills between national markets, but the lack of sufficient mutual recognition arrangements between national public health education and industry certification systems can affect worker mobility. This can risk depriving companies of the skilled individuals it needs, and limit the working opportunities of an increasingly international group of workers. [9]

Partnerships between business, government and the third sector civil society are a growing feature of both industrial and emerging economies. Such multi-stakeholder partnerships (MSPs) are necessary because it is increasingly clear that no single sector in society can deliver the complexities of sustainable development and education in today's global economy.

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[6] Working Group 5 -- Skills and Employability, Taskforce on ICT Competitiveness and ICT Up-take, European Commission, *Topic Paper*, September 26, 2006 draft, p 4

[7] Working Group 5, ref 6, p 4

[8] Bellini, R.; Schgör, P.; Weiß, P.: *ICT Certification in Europe*, Proposal Working Group: ICT Certification,CEN/ISSS WS ICT Skills, Technical Report, internal use, dated 10 April, 2007

[9] Working Group 5, ref 6, p 10

MSPs build on the idea that the business sectors can complement, supplement and extend services provided by the public sector by increasing the available resources. Another advantage is utilising and combining the respective strengths and resources of the different actors, and compensating for each other's respective weaknesses. [10]

The challenge is to apply the lessons learned from "e-Skills capacity building" for sustainable education and labour competences. Many agree that this can best be done through the tool of multi-stakeholder partnerships. There is also wide agreement that these MSPs must include universities.

2. RECOGNITION OF LEARNING

The demand for life-long learning creates the need to account for all categories of formal and informal learning and it highlights the need to use alternative mechanisms for delivering learning (e.g. distance learning, e-learning, etc). This results in a requirement for a flexible credentialing system for recognising learning to provide those pursuing life-long learning with the ability to formally document their continuously evolving stock of knowledge and skills.

Such a system needs to:

- Facilitate linkages between different types of qualifications
- Articulate training standards and qualifications that link formal and informal learning
- Integrate the needs of the labour market [11]

Worker mobility adds urgency to the certification dilemma. Worker mobility is on the increase around the world, and is highly visible in Europe as a consequence of enlargement of the European Union coupled with growth of the multinationals. This presents challenges for employers as well as those who want to move countries to further their careers, or simply to find a job, in terms of being able to quantify and certify skills and training.

Moreover, as noted by Bellini, Schgör and Weiß in their technical report to the European Commission for an initiative for ICT Certification in Europe,[12] certification "appears to be an appropriate mean to increase the mobility of the ICT workforce in Europe." Certifications need to be portable and recognised by employers no matter where they are located.

Observers inside the ICT industry and within governmental bodies or opinion-leading bodies, look upon the bewildering (and increasing) array of available industry certifications with some consternation. For example, the CompTIA Tech Career Compass lists some 800 global ICT

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[10] e-SCC, Issue Paper for the "European Skills Forum": *eSkills Public-Private Partnerships*, 24 March 2004, p 4, see: http://www.e-scc.org/docs/PPP_eSkills_Forum_Final.doc

[11] CompTIA, ref 3, p 8-9

[12] Bellini et al., ref 8

certifications. Further, CompTIA estimates that over 69 ICT vendors run certification programmes with approximately 4.5 million individuals certified worldwide. [13]

Michiel Van der Voort observes that the numbers alone suggest that there are too many certifications and employers have no way of knowing their value. He says companies are looking for transparency and trustworthiness in a limited set of global certifications. [14] This observation seems to be shared by Bellini, et al. who state that "a multitude of offerings and products do exist and a proliferation of job titles and roles can be observed. As a matter of fact, the certification market is difficult to overview due to significant variety and diversity of ICT skills certification products ..." [15]

Already the use of industry-based certifications (IBCs) in the ICT industry has changed the manner in which knowledge and skills are recognised. This is not surprising given the rapid pace of change in the industry, driven by competitive pressures. The overlay of global business and economy and resulting worker mobility make it necessary to leverage IBCs and use the concept to meet a wider range of objectives and goals, including public policy. [16]

2.1 The European Industry Approach to e-Skills Learning

On one hand we have a rich array of industry-based certifications which need to be rationalised, categorised and assigned some sort of validation. On the other hand, we have e-skills solutions offered in universities and *Adult and Continuous Education* (ACE) institutions which need to have the credibility and standing to accurately validate the knowledge required for the ICT embedded economy and society at large.

This can only be achieved with industry participation and endorsement as well as development of a standard that meets the expectations of all stakeholders: industry, government, and third sector ACE actors such as universities and other education partners.

3. A MARKET-READY WORKFORCE THROUGH MSPs

We have acknowledged the existence of "parallel universes": on one side, the public or government-supported VET/ACE, and on the other side industry-based e-skills training, validation and certifications (which often lack public endorsement.

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[13] Van der Voort, Michiel van der Voort, *European-Wide Recognition of e-Skills Certification from an Industry Perspective*, 2005, p 2, citing CompTIA's *Second Annual Survey into the State of the IT Training Industry in EMEA,* October 2004, see:
http://www.e-scc.org/docs/eChallenges%20Paper%20MvdVoort%2013105_.pdf
[14] Van der Voort, ref 13, p 2
[15] Bellini et al., ref 8
[16] CompTIA, ref 3, p 19

Due to the speed of technological development, public education/training modules often lack professional qualifications in line with demand and new market trends.

Multi-Stakeholder Partnerships have been identified as the main tool to bridge the parallel universes through integration and inclusion of industry-based certifications into traditional, State-recognised training and portals/frameworks.

3.1 Different Levels and Typologies of Partnership

• **Individual product cooperation**

   "Corner stone" cooperation between partners of various sectors to develop jointly industry-based curricula, certifications, and training material, either vendor-specific or vendor-neutral (example: CompTIA's "e-Security certification": partners include Government institutions, commercial undertakings and academic sector bodies)

• **Institutional partnerships**

   Strategic and other alliance-based partnerships through the whole ACE value-chain for content, training, and/or labour monitoring and Placement (examples incl. European Technology Platforms/ETPs, Living Laboratories/LL, Creative Commons/CCs, *European Alliance on Skills for Employability*[17])

• **Associative interaction of social segments within the society**

   Constitutional pattern allowing for associative economics through financial autonomy and functional competence of social segments (key: basic income through financial/fiscal support schemes).

3.2 Different Roles of e-Skills Stakeholders

"The deployment of 21st Century training and education partnerships will see clearly distinct roles of the major stakeholders involved: industry governments, and third sector partners".[18]

These distinct roles of tri-sectoral e-skills stakeholders are described as:

• **ICT industry training channels**

   Ensure that performance standards (associated with industry certifications) and validation support "workability" by closer alignment to industry requirements.

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[17] See: http://www.e-scc.org/alliance/default.aspx

[18] Tunis e-Skills Report: "e-Skills Capacity Building for Growth and Employability, *Making the Information Society a Reality*", World Summit on the Information Society, Tunis, 16 November 2005, see: http://www.e-scc.org/docs/Tunis_report_FINAL_10%20Dec.pdf

- **Academic and ACE educational institutions**

  Ensure – beyond the public needs of general ACE education goals – that credentials educational institutions confer remain relevant industry and other stakeholders and the society at large.

- **Governments and public institutions**

  Ensure a tech-neutral enabling environment to provide individuals with the opportunity to attain workable e-skills with identifiable value through self-training or other learning modes.

3.3 e-Skills Training Financial Support Schemes

- **Financial Schemes**: Better allocation of existing public resources to fund needed e-skills capacity building to leverage the existing knowledge, experience and energy of the commercial training market, and stimulate private investments to advance public goals in VET/ACE

- **Global discussion** on education and other basic income support schemes (US: "Basic Income Guarantee", "Earned Income tax Credit/EITC"; Brazil: "Renda Basica", Germany: "Grundeinkommen", etc.) or other commons-based socially mutualised funding

- **BI/BIGs** and similar financial/fiscal schemes are tools to guarantee in the public/private education sector **individual autonomy to select from various MSP (self-) training and e-skills certs/validation offerings**

- **Best practices:** Need for better insight into best practices of fiscal and other financial support schemes for e-skills training**,** incl. "education vouchers", and "training checks", Social Funds, BI/BIGs, tax credits, e-skills VET/ACE training support model laws[19], etc.

4. SOME EXAMPLES

Examples are emerging in the European Union's Member States of steps toward MSPs for e-skills certification and recognition that bridge the "parallel universes". In the UK and in the Netherlands, there are programmes to facilitate recognition of vendor certifications affiliated with the educational systems in those countries. The Hungarian government has made a commitment to create a new "National Vocational Qualification". The result was the first NVQ developed solely by industry

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[19] e-SCC: European Model Law "Skills and Technology Retraining For Employability", 5 June 2006, see: http://www.e-scc.org/docs/eSCC_European%20Model%20Law_version%205%20June.pdf

and formally recognised by the national educational system of a European country. [20]

The e-Skills Competences Consortium envisages an eventual EU e-Skills Meta-Framework to "permit mutual recognition within the EU of public qualifications and vendor certifications gained within the workplace and across different national educational systems, all the time respecting national differences and preferences." [21]

4.1 Benchmarking policies on multi-stakeholder partnerships for e-skills in Europe

As part of a major study, launched by the European Commission DG Enterprise and Industry in late 2006, a multitude of MSPs for e-skills development and related policies are being identified using a network of National Correspondents from all EU27 Member States as well as Croatia, Iceland, Liechtenstein, Norway and Turkey.

The policies and partnerships identified are analysed and evaluated. This will result in ten best practice case studies, a benchmarking framework, and recommendations for policy action. First findings are available and the publication of the bulky interim report is forthcoming. [22]

4.2 Multi-Stakeholder Partnerships for Education (MSPE)

There are plans proposed by the European Commission for the creation of a "European Institute of Technology" (EIT), launched in 2005 along with a rejuvenated and revised Lisbon Agenda. The EIT is "intended to be a new flagship for excellence in higher education, research and innovation." [23] The ICT and at least part of academic communities are optimistic that the EIT can become part of an MSP to drive mutual recognition of ICT competences and applicability to the real world of the knowledge-based economy.

And, in the global arena, the World Economic Forum and UNESCO have created "Partnerships for Education" (PfE), to work collaboratively with other global initiatives and deliver effective private sector contributions to "Education for All" goals. PfE will provide specific help in crafting and sustaining what the Forum and UNESCO call "Multi-Stakeholder Partnerships for Education" (MSPE). [24] One can envisage how this PfE initiative could be applied specifically to "MSPEs" for ICT education and building e-competences.

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[20] e-SCC, ref 10, p 10-11
[21] e-SCC, ref 10, p 12
[22] http://www.eskillspolicy-europe.org/
[23] European Commission, European Institute of Technology
http://ec.europea.eu/education/policies/educ/eit
[24] World Economic Forum and UNESCO Partnerships for Education,
http://weforum.org/en/initiatives/gei/partnershipsforeducation

5. CONCLUSION

The emerging life-long learning paradigm of the 21st century implies a **stronger role for key stakeholders** *compared to the past. … Co-operation between users and providers of e-skills employability alike will enable people to acquire the capabilities they need to actively and continuously participate in an inclusive world economy.*[25]

The multi-stakeholder process needs to address potential barriers and resistance, put in place transitional mechanisms and create positive incentives for change that leverage the creative potential of the different actors, allowing them to work on established as well as new roles and responsibilities. This process will vary from country to country as the strategic framework is translated into action. [26]

Some questions that might be used to assess effectiveness of MSPs for e-skill certification might be:

- Do frameworks established through MSPs enhance support and recognition/endorsement of industry-based e-skills training and certifications to bridge formal and non-formal ICT education, self-training and certification?

- To what extent have EU Member States been encouraged to remove any barriers in their funding for education and training that impede vocational education/ACE actors and commercial trainers offering industry-based curricula and certification?

- How has multi-stakeholder networking that promotes e-skills capacity building and vocational training partnership throughout the learning value chain been encouraged? Has this networking delivered a range of choices for ICT professionals and users at all levels?

- Have MSPs led to the provision of urgently needed fiscal incentives or other forms of financial basic income support options to encourage the pursuit of e-skills that are tested, recognised and certified?

It is vital to raise awareness in academic and policy-making circles about the value of market-recognised e-skills credentials, and also to raise awareness about the value of multi-stakeholder partnerships to bridge the gap between industry and public resources/needs.

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[25] "The Tunis e-Skills Declaration, e-Skills Capacity Building for Growth and Employability", World Summit on the Information Society, 16 November 2005, see :
http://www.e-scc.org/docs/Tunis_Declaration_EN.pdf
[26] e-SCC, ref 10, p 5