Updates on the ECQA Certified Researcher Entrepreneur Qualification

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Topics:

1. Introduction

2. ResEUr Skill Card
   2.1. The Training Needs Identification – Survey Results in Romania
   2.2. The ResEUrSkill Card Definition

3. ResEUr workshops & training sessions

4. Conclusions
The ResEUr project aims at delivering to innovative researchers entrepreneurs the qualification to determine if their work and/or their ideas have a market potential, as well as to be able to create a commercial interest for what they are doing.

The ResEUr expected results envisaged are a skill set which clearly describes the skills required for a researchers to turn their ideas into marketable products, and thus to be able to create and develop a sustainable enterprises.
Partners / Coordination of the ResEUrl project

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EMIRacle is an association of 20 leading research laboratories in 14 different countries. Their common mission is to act as a collaboration partner for European Product Development Enterprises in Manufacturing and Innovation research, with the goal of maintaining and improving their leading positions worldwide by increasing their productivity and innovation power.

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1. Introduction

- Entrepreneurship consists of “the mind set and process (needed) to create and develop economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organization” – European Commission, 2008.

- Since 2002 Eurobarometer surveys demonstrate that EU citizens are less attract to become entrepreneurs, and more risk-averse than their American or China counterparts.
  - American dream in USA – the rate of high-expectation entrepreneurship in the general population is very high in North America, 15 in every 1,000 US adults;
  - there is a new ambition capital of the world for China – there are more high-expectation entrepreneurs that any other country, with 17 in every 1,000 adults rate;
  - Europe has limited levels of high-expectation entrepreneurship – just 4 in every 1,000 European adults are entrepreneurs with high-growth expectation.
European Union Recognizes the Problem ...

- .... and made entrepreneurship one of the main objectives of the Lisbon Agenda in 2000.

- In January 2003, it adopted a “Green Paper on Entrepreneurship in Europe” to stimulate the debate amongst policy makers, businesses, representative organizations and experts on how entrepreneurship can be better promoted in Europe.

- **Education can contribute to encouraging entrepreneurship**, by fostering the right mindset, by raising awareness of career opportunities as an entrepreneur or a self-employed person, and by providing the relevant business skills.
# Growth Model Based on Entrepreneurship

## Private sector growth

### Pillars of entrepreneurship:

<table>
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<tr>
<th><strong>Access to financing:</strong> debt and equity capital for long and short terms needs; alternative liquidity vehicles and financial products</th>
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<tbody>
<tr>
<td><strong>Business services and skills:</strong> basic business training; technology; marketing; planning and strategy</td>
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<tr>
<td><strong>Conductive business environment:</strong> policy environment; regulatory and legal; tax policy; strong institutions</td>
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### Foundation of private business: EU strategies & politics; national, regional & local facilitators; law & taxation; physical & social infrastructure etc.
The Key Element: EDUCATION

The motivation for the ResEUr project lies in the lack of a European-wide valid set of training modules and certification of entrepreneurial skills of young academic people. Europe is far from exploiting its potential of successful entrepreneurship in higher education, because it often fails to mobilize the right innovative resources and young brains.
For the ResEUr skill card definition, there has been conduct:

- A **marketing research** with the master and PhD. students for the training needs identification (in Romania because of the transfer of innovation need from other European countries to Romania);

- A large **reference research** developed by all the partners in order to collect and formalize the knowledge in the field. In addition, there have been indentifies important references regarding the entrepreneurship facilitators.
The study surveyed master and PhD students that are unemployed and employees of companies located in the West part of Romania, from different industries.

Students were selected randomly and 87 questionnaires fill-up were received and process (sample size n=87 from which

- 14 unemployed - 6 PhD students and 8 master students and
- 73 employed - 26 PhD students and 47 master students).

The e-mail and face-to-face structured interview method were adopted to obtain responses to the study’s survey instrument.

The research was conducted from September to December 2010.

For the **structured interview method** approach a **questionnaire** has been developed. The questionnaire structure follows the first draft of the ResEU skill set.
The Questionnaire:

• Do you consider an opportunity (useful) for you to be involved in a training program related to ...?

All questions on training needs were measured on a six point Likert scale (1 = “fully disagree” – 6 = “fully agree”). In order to facilitate interpretation, scores were aggregated after data collection as follows: score 1 or 2 = “Disagree”, score 3 or 4 = “Neither agree nor disagree” and score 5 or 6 = “Agree”.

In the end of each chapter, an open question was addressed in order to collect information regarding the future training materials content (subject of interest).
The Skill Matrix Related to ResEUr Training Needs:

**Comments:**
1. Maximum score
2. Most interesting teaching subjects:
   - Skills development related to abilities of networking (Q2);
   - Knowledge transfer and innovation related to entrepreneurship behaviour development (Q11);
   - Social skills development parried with technical abilities (Q16);
   - Business risk management methods and tools (Q21).
2.2. The ReEurSkill Card Development

Performance Criteria (PC) with *storybook*: Keywords, bulleted lists per PC about the content

- List of References
  - M1: VM 15 April 2010
- PC, slide plan (mapping of storybook to slides), notes elements
  - M2: VM 26 May 2010
- Complete Slides and Notes
  - M3: PM Timisoara 3-6 July 2010
- Dissemination Elements
  - PM dEUCert Krems 29-30 March 2010

Planning

Understanding the Entrepreneurship

Key Success Factors for Entrepreneurship
- ResEur:U1.E1, proHuman, 60 min
- National Facilitators of Entrepreneurship
- ResEur:U1.E2, proHuman, 30 min
- European Facilitators of Entrepreneurship
- ResEur:U1.E3, proHuman, 30 min

General Subjects

- Use of Web 2.0
- Open Innovation
- GIT
- Risk Consideration and Mitigation
- UPT
- Dissemination and Feedback
- Collection to create Partner Networks
- EMIRacle

Opening and Team Learning
- ResEur:U5.E1, ISCN, 50 min
- Leadership and Team Motivation Factors
- ResEur:U5.E2, UPT, 45 min
- Social Skills paired with Technical Abilities
- ResEur:U5.E3, UPT, 50 min

Empowerment by Learning Organisation Environments
- ResEur:U5, UPT, 145 min

Innovation Transfer
- ResEur:U3, Skills Intl., 135 min
- Business Potential Profiling
- ResEur:U3.E1, Skills Intl., 45 min
- Preparing Innovation Transfer Contracts
- ResEur:U3.E2, Skills Intl., 45 min
- From Prototypes to Products
- ResEur:U3.E3, GIT, 45 min

Shaping Ideas
- ResEur:U2, GIT, 110 min
- Methods for structuring Ideas
- ResEur:U2.E1, GIT, 60 min

Knowledge Networking
- ResEur:U4, ISCN, 150 min
- Complementary Skills Networking
- ResEur:U4.E1, ISCN, 50 min
- Business and Services Networking
- ResEur:U4.E2, ISCN, 50 min
- Creating joint visions of Products and Services
- ResEur:U4.E3, GIT, 50 min
## ResEur Training Plan:

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<tr>
<th>Shaping Ideas</th>
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<td>Selected Aspects</td>
<td>Risk Consideration and Mitigation</td>
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<td>Open Innovation</td>
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3. ResEUsr workshops & training sessions

First international ResEUsr Workshop at EuroSPI 2010, Grenoble Institute of Technology, France:

Selected Elements for the EuroSPI 2010 Workshop for Certified Researcher – Entrepreneur

- Shaping Ideas – Forming the Mindset of Students
- Innovation Transfer – Business Potential Profiling
- Selected Aspects – Risk Management and Mitigation
- Exercise ‘Core Competence Analysis’ as useful basis for business potential profiling
Successful first ResEUr Workshop for Young Researchers:

Turn research and innovation into business!

- 10 young researchers were curious to learn about ideas, inventions, and innovations, about how they could shape their ideas in a way that these have the best chances to transfer innovations to the market.

The topics were presented by Prof. Serge Tichkiewitch (EMIRAcle and Grenoble INP), Andrea Fenz (Skills International GmbH), and Claudiu Albulescu (Universitaty Politehnica of Timisoara), respectively.
Key Success Factors for Entrepreneurship!

The definition of mission and business field goals was carried out successfully as practical exercise by researchers participating in selected modules of the ResEUr training programme conducted by Mag. Andrea Fenz (Skills International GmbH).

EuroSPI2011; Roskilde University, Roskilde Denmark; June 27, 2011
ResEUr Qualification and Certification Schema: An Opportunity for Romanian Researchers

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<tr>
<th>Time</th>
<th>Activities</th>
<th>Trainers/speakers</th>
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<tr>
<td>08.00</td>
<td>Welcome</td>
<td>Prof. Anca Draghici</td>
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<td>08.30</td>
<td>ResEUr qualification and certification schema</td>
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<td>Certification procedure. Presentation of ResEUr Skills Set</td>
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<td></td>
<td>Questions and Answers!</td>
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| 08.30 | Presentation of ResEUr Training Units & Demonstration with ECQA e-learning platform | Prof. Anca Draghici  
Prof. George Draghici  
UPT PhD Students: Larisa Ivascu, Alina Radu & Dorian Stef|
| 10.45 | Questions and Answers!                                                      |                                                      |
| 10.45 | Questionnaire – collecting the impressions and the attractiveness of ResEUr qualification and certification schema | Final remarks; end of Workshop.                      |

The 5th International Conference on Manufacturing Science and Education

Creative Thinking in Engineering and Academic Education

Sibiu, RO, June 2-5, 2011
Successful ResEUr Interactive Workshop in MSE 2011, Sibiu, RO:

Learn how to target your Research to Innovation and Entrepreneurship with Success!

- 18 PhD students from Sibiu, Brasov and Timisoara universities have participated.
- All the Workshop Materials used were in Romanian language!
European Certification and Qualification Association – new profession!

The ResEUr training has been integrated into the homepage of the ECQA Website [www.ecqa.org](http://www.ecqa.org). This will take you to the "Capability Adviser" Environment, which accompanies you along your lifelong process of self-assessment, learning and certification for different job roles.

There you find different portals, such as

- **Learning Portal** - a Moodle-based e-Learning environment, where learning modules have been configured for all ResEUr course elements.
- **Examination Portal**

E-Learning courses for ResEUr started in 2011 supported by a transnational trainer group!
3. Conclusions

• Innovation in the **Pedagogic Approach** of Teaching Design Skills;

• Identification and Specification of the **Key Researcher-Entrepreneur Skills** for the EU Competitive Market;

• Capitalization on Results of partners previous projects and experiences in the field of entrepreneurship;

• Capitalization on existing **ECQA System and Infrastructure** – exploiting the existing infrastructure at the European level;

• **Transfer** of Knowledge and Experiences to/from University Curricula – increasing the international visibility of the master programs!
On-going Work:

- Defining the **training materials (ppt and notes) and the e-learning platform**; **translation** into French, German, Romanian, Slovenian languages;
- Delivery of **pilot trainings sessions** ..... ;
- Specification of **examination questions**;
- **Qualification schema** adaptable to eLearning and / or onsite environment!
- Started the qualification procedure with students from Romania!
  Onsite trainings e.g. also in Austria.
- In September the e-learning platform and the Exam portal will be open!

**Broad dissemination** activities!
Thank you for your attention!

- These research were gained in the context of the project: ResEUri Certified EU Researcher – Entrepreneur (503021-LLP-1-2009-1-BE-LEONARDO-LMP), founded with support from the European Commission.
- The presentation of this paper is also connected with dEUcert project: Dissemination of European Certification Schema ECQA, 505101-LLP-1-2009-1-AT-KA4-KA4MP that was funded with support from the European Commission, also.
- The paper and communication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.