

## MASTER STUDENTS' INTEREST FOR ENTREPRENEURIAL SKILLS DEVELOPMENT

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**Abstract:** The paper presents an education marketing research for identifying the master students interest regarding a skill unit define for the new job role, so call Research-Entrepreneur that will be trained and certified at the European level with the support of ResEU project, a Leonardo da Vinci Program (2009-2011). The research has been conduct with the master students of the Management Faculty in Politehnica University of Timisoara, Romania. The general overview of the research results underline that master students' are interested for their personal and professional competencies development. The most answers are related to the levels of interest: "much" and very much", for employed and unemployed students, too.

### 1. INTRODUCTION TO THE RESEARCH CONTEXT

The motivation for the present paper is linked with the ResEUr project (Certified EU Research-Entrepreneur, a Leonardo da Vinci Multilateral project for the Development of Innovation, 503021-LLP-1-2009-1-BE-LEONARDO-LMP [10]) that 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. The proposed project aims at delivering to innovative researchers 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 results envisaged consist of a skill set which clearly describes the skills required for a researcher to turn his ideas into marketable products, and thus to be able to create and develop a sustainable enterprise. For all the skill elements training material will be provided in several languages and in an e-learning environment. A pool of test questions will be defined, which provides the basis for the certification of students. All these elements will be verified with a number of students in the context of initial trainings and certifications.

*Table 1. The ResEUr project partners [8]*

<b>Partner no.</b>	<b>Organization name</b>	<b>Role in the project</b>
<b>1</b>	EMIRAcle – European Manufacturing and Innovation Research Association – a cluster leading excellence Brussels, Belgium	Applicant
<b>2</b>	Politehnica University of Timisoara, Romania	Partner
<b>3</b>	Institute Polytechnique de Grenoble, France	Partner
<b>4</b>	International Software Consulting Network Ltd. Wicklow, Ireland	Partner
<b>5</b>	proHUMAN Cooperation and Business Management Ltd. Maribor, Slovenia	Partner
<b>6</b>	Skills International GmbH Grossklein, Austria	Partner

Table 1 shows the partners involved in this project. By its very composition, the proposed consortium will be able to exert a significant impact on a European level. To give examples, the applicant organization EMIRAcle unites a large pool of leading universities, who are all very active in leading-edge research as well as in organizing influential and recognized international conferences. Members are able to pre-select researchers based on a long-term observation of their works. International Software Consulting Network Ltd. Wicklow, Ireland (ISCN) as coordinator of the EuroSPI initiative runs a PhD selection program, where a number of international PhD students are assessed based on the innovation potential of their contributions to the topic of software and innovation process improvement. Grenoble INP has established a "House of Entrepreneurship", which is dedicated to mobilize researchers to turn their research results into successful innovations on the market [5, 6, 8].

The ResEUr project will benefit from the support of the European Qualification and Certification Association e-learning platform (Moodle platform, www.ecqa.org) that was developed in the last 10 years where in the European Union Life Long Learning Program different educational developments decided to follow a joint process for the certification of persons in the industry [6, 7].

During some virtual meetings and 2 project meetings there have been established the skill card with units and elements that describe the content of the future training program. The main skill units that will be developed by the partners involved in the project are shown in table 2.

**Table 2. The ResEUr skill units**

No.	Skill unit	Partner responsible with the skill unit development
1	Understanding the Entrepreneurship – ResEUr.U1	proHuman
2	Shaping Ideas - – ResEUr.U2	GIT
3	Innovation Ideas – ResEUr.U3	Skills Int.
4	Knowledge Networking – ResEUr.U4	ISCN
5	Empowerment by Learning Organization Environments - ResEUr.U5	UPT
6	General Subjects - ResEUr.U6	GIT, UPT, EMIRAcle

In the following shall be present and debate the results of a marketing research regarding the master students' interest (students from the Management Faculty, Politehnica University of Romania) for a particular skill unit built by UPT.

## **2. THE INTEREST OF ROMANIAN STUNDETS FOR THE ECQA SCHEMA IN THE FIELD OF ENTREPRENEURSHIP**

### **2.1. Skill Description**

The marketing research was conduct with the second year of study master students from the Management Faculty of the Politehnica University of Timisoara. There have been design the research scenario for collecting master students opinion about the utility of one skill unit so call: *Empowerment by the Learning Organization Environment*. This unit consists of the following define skill elements:

1. Openness and team learning that aim to provide methods for training openness, for new strategies in knowledge sharing in a team and its advantages, and for feedback and leadership approaches accepting and empowering, the integration of new ideas.

Students will specifically learn: the requirements for a team learning culture and how to exploit it; the requirements for openness principles and how to socially train/exercise openness; the requirements of team (leadership) styles allowing innovation to grow and to empower new ideas [1, 2, 3].

2. Leadership and team motivation factors will focus on: leadership behavior when considering the entrepreneurial attitude (style, emotions, self motivation) - individual behavior and leadership by a group (leadership teams, action oriented team leadership skills for cross-functional teams) - group/team behavior. The performance criteria are related to: the most relevant personal characteristics, behaviors, models for being a successful leader; how to create a positive work environment through effective coaching and mentoring; principles of inter-personal relationship, decision making, innovation lead, growth and change techniques; collaborative leadership [1, 2, 3].

3. Social Skills paired with Technical Abilities element will train students in the field of social communication based on the valorization of their emotional intelligence. The key elements that will be trained are related to the intellectual capital concept and its relation/effects to entrepreneurship behavior development: to achieve effective communication (overcoming potential barriers, preventing conflicts, using feed-back, adapt communication to audience etc.); multicultural collaboration (understanding cultural differences, communication particularities and barriers, criticism etc.); general business ethics; laws and regulations regarding corporate social responsibility as part of the social skills development (e.g. ISO 14000; the future ISO 26000 etc.); potential benefits of corporate social responsibility (responsibility, as an individual social behavior - entrepreneur and for his enterprise, in terms of: human resources, risk management, brand differentiation, license to operate); principles of Green Business (green-entrepreneur, eco-entrepreneur) [4, 7].

The research objective was to collect master students opinion about the utility of these elements in their profession and about their interest in having a training program in this domain, based on their previous knowledge gained by the support of different subjects of the master program.

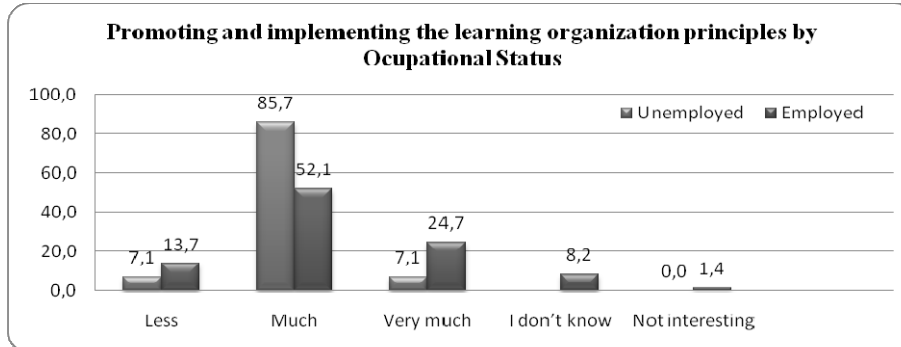
## **2.2. Research Design and Results**

Started from the skill unit definition and description that is the result of many ResEUr virtual meeting and two project reunion (Maribor, Nov. 2009; Grenoble, March 2010) we have tested the interest of the master students (from the Politehnica University of Timisoara Romania, Management Faculty) for entrepreneurship training programs and having benefits from the learning organization environment offer by the university. A structured questionnaire have been build (with closed and open questions) based on the defined skill card (in the ResEUr project) and was distributed to the second year of study master students (from a total of 152 students, only 96 students were respondents). The sample characteristics that were consider for the responds analysis and conclusions formulation was the professional status (employee or unemployed master students). The data process has been done using the SPSS program.

In the following figures are presented the most relevant research results regarding the learning organization benefits for entrepreneurship development, as they were expressed by the master students. The graphics and the associated tables presents the main results of 7 close questions that have been ask to the master students related to the learning organization support for developing the entrepreneurial behavior. The general overview of Figure 1 – 7 underline the students' interest for the proposed subject of skill development. In most of the figures, the percent of the answer are most related to the levels of interest:

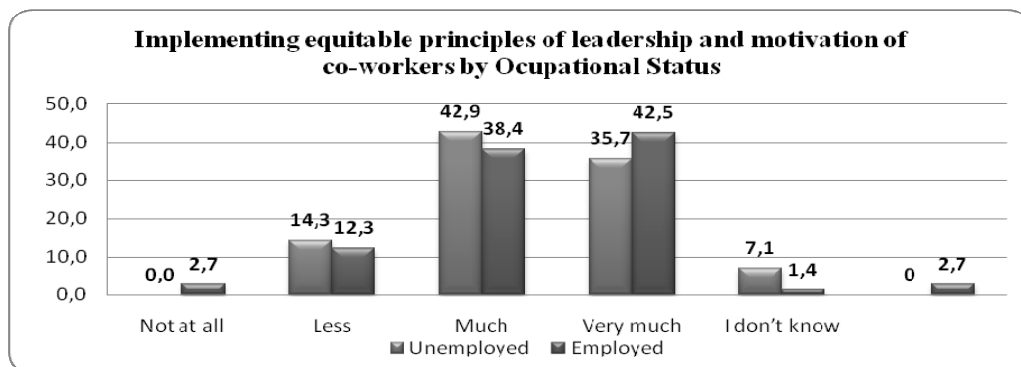
“much” and very much”. This opinion has been expressed by the master students that are employed and unemployed, too.

Figure 1 shows that 85.7% unemployed and 52.1% employed master students are much interest in having benefits of their education process from a learning organization environment, such as UPT-MPT is.



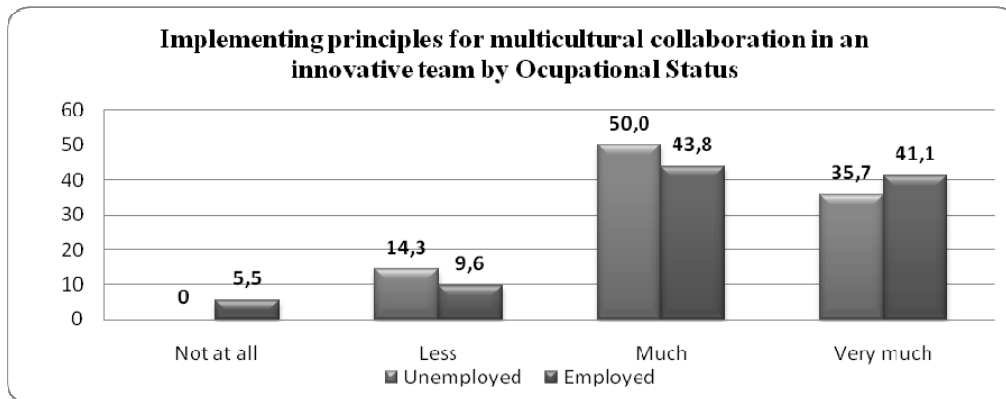
Degree of interest %	Mater student:	
	Unemployed	Employed
Less	7.1	13.7
Much	85.7	52.1
Very much	7.1	24.7
I don't know	0	8.2
Not interesting	0	1.4

**Figure 1. The students' interest in promoting and implementing the learning organization principles**



Degree of interest %	Master student:	
	Unemployed	Employed
Not at all	0	2.7
Less	14.3	12.3
Much	42.9	38.4
Very much	35.7	42.5
I don't know	7.1	1.4
Not interesting	0	2.7

**Figure 2. The students' interest in implementing equitable principles of leadership and motivation of co-workers**



Degree of interest	Master student:	
	Unemployed	Employed
Not at all	0	5.5
Less	14.3	9.6
Much	50.0	43.8
Very much	35.7	41.1

**Figure 3. The students' interest in implementing principles for multicultural collaboration in an innovative team**

Figure 2 shows the students answers regarding the processes of implementing equitable principles of leadership and motivation of co-workers when we describe the working/learning environment. The answer agree on this principles much (42.9% for the unemployed students and 38.4% for the employed one) and very much (35.7% for the unemployed students and 42.5% for the employed one).

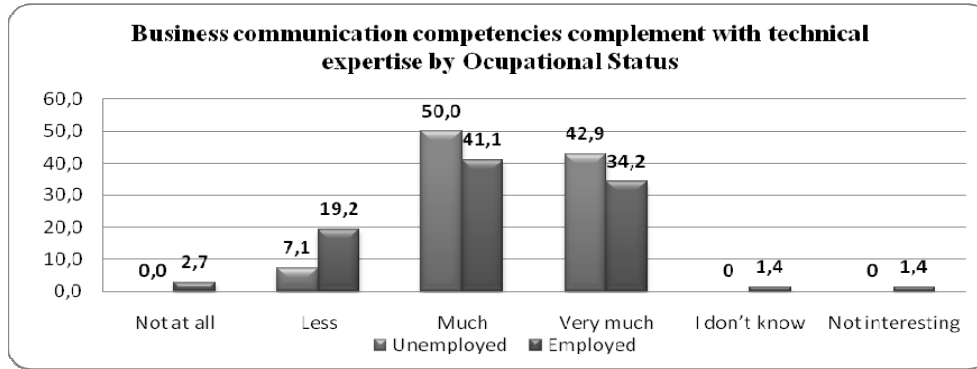
Figure 3 shows that students agree on having an explicit training on multicultural collaboration (for increasing their working team agility). The answers agree on these principles: much (50% for the unemployed students and 43.8% for the employed one) and very much (35.7% for the unemployed students and 41.1% for the employed one).

Figure 4 shows that students agree on having an explicit training on business communication as this is very useful for their present and future profession. The answers agree on this training aspect: much (50% for the unemployed students and 41.1% for the employed one) and very much (42.9% for the unemployed students and 34.2% for the employed one).

Figure 5 show that students have very much interest in personal competencies development that are linked with emotional intelligence (57.1% for the unemployed students and 58.9% for the employed one).

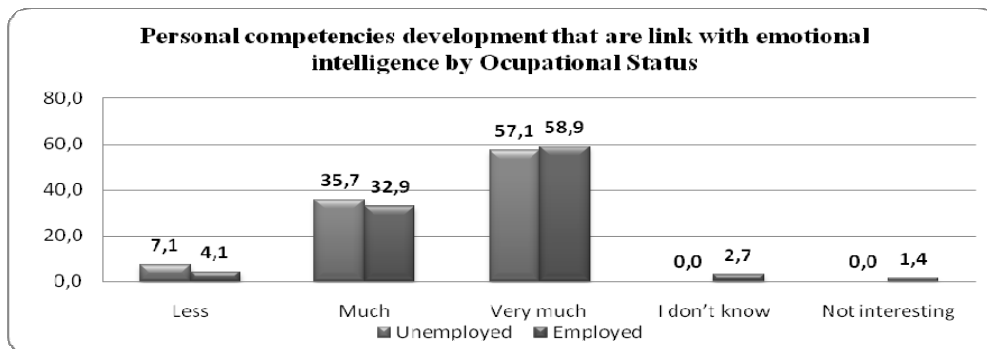
Figure 6 show that students have much interest in personal competencies development that is link with social responsibility (71.4% for the unemployed students and 42.5% for the employed one).

The final question asks for the master students' interest for a training program in the field of social competencies development that can contribute to an entrepreneurship behavior development. The answers agree on the training program in the field: much (57.1% for the unemployed students and 42.5% for the employed one) and very much (14.3% for the unemployed students and 30.1% for the employed one).



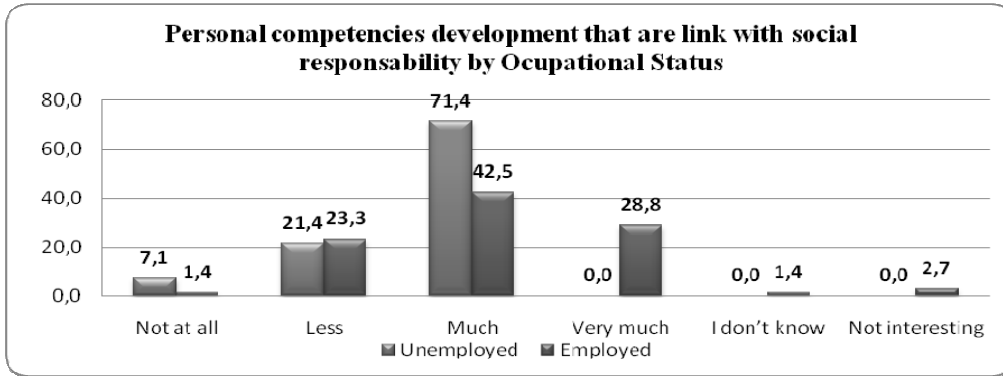
Degree of interest	Master student:	
	Unemployed	Employed
Not at all	0	2.7
Less	7.1	19.2
Much	50.0	41.1
Very much	42.9	34.2
I don't know	0	1.4
Not interesting	0	1.4

**Figure 4. The students interest regarding business communication competencies complement with technical expertise**



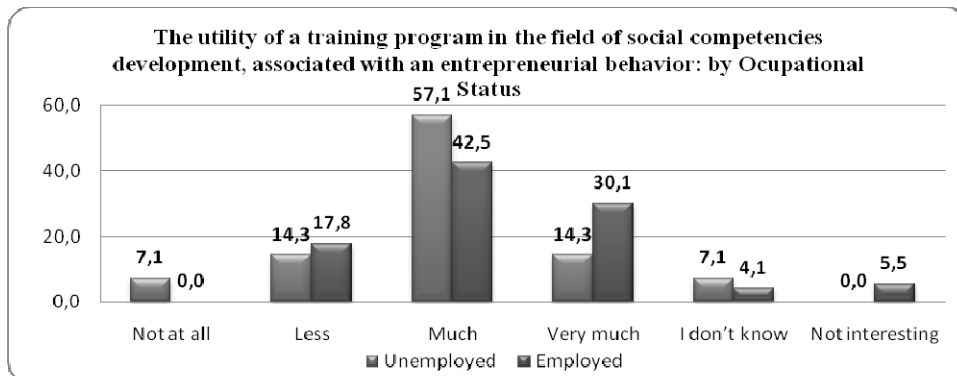
Degree of interest	Master student:	
	Unemployed	Employed
Less	7.1	4.1
Much	35.7	32.9
Very much	57.1	58.9
I don't know	0	2.7
Not interesting	0	1.4

**Figure 5. The students interest for the personal competencies development that are link with emotional intelligence**



Degree of interest	Master student:	
	Unemployed	Employed
Not at all	7.1	1.4
Less	21.4	23.3
Much	71.4	42.5
Very much	0	28.8
I don't know	0	1.4
Not interesting	0	2.7

**Figure 6. The students interest for the personal competencies development that are link with social responsibility**



Degree of interest	Master student:	
	Unemployed	Employed
Not at all	7.1	0
Less	14.3	17.8
Much	57.1	42.5
Very much	14.3	30.1
I don't know	7.1	4.1
Not interesting	0	5.5

**Figure 7. The students interest for a training program in the field of social competencies development, associated with an entrepreneurial behavior**

### 3. CONCLUSIONS

The paper presents the context of the ResEUr project that has the main objective to develop the Research-Entrepreneur skills qualification and certification at the European level. The presented marketing research shows master students interest for having extra training program and taking advantages from the learning organization environment offer by UPT-MPT. The *main opportunities* from the European certification of the integrated designer profession in the case of Romanian are: (1) It offer the possibility for having a EU certificate (total or partial) for the students that follow the training program and pass the examination process successful (more than 70% of the answer are correct) together with the master diploma. This certificate offer them complementary competencies, compatible on the EU labor market (e.g. students can be easy integrated them self in multinational companies in Romania or in other companies in Europe). This opportunity can be attractive for the PhD. students and young researchers, too; (2) This qualification and certification opportunity can be used by employed in industrial companies that want to update and develop their knowledge in the entrepreneurship field for better align themselves to the new trends (new processes and new requirements); (3) The different skill units of the training program can be introduce in some master program courses (in their syllabus) and so, students can be easy trained for being certified; (4) The Romanian master programs in the field of business management can obtain an European dimension and they can be more attractive for the potential students; (5) Universities or other training bodies can became collaborators of the ECQA and they can benefit from the established schema and experience gained [6].

The presented paper is linked with the research activities of the project: 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 connected with the dEUcert project (Dissemination of European Certification Schema ECQA, 505101-LLP-1-2009-1-AT-KA4-KA4MP), that has been funded with support from the European Commission, also. This paper and communication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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