

# Entrepreneurship and higher education. An outlook on some best practices in entrepreneurship education

Irina Purcarea

## **Abstract**

The paper looks at some of the different perspectives on entrepreneurship education, with an emphasis on several entrepreneurship education trends in higher education institutions at European and international level. It also looks at the relationship between universities and the business environment in the development of entrepreneurship education along with some potential directions for public policy involvement in university entrepreneurship support.

**Keywords:** entrepreneurship education, entrepreneurial universities

**Jel:** A2, I2, I25, M13

## **The entrepreneurial university**

Universities are now increasingly recognized to have a broader role in the economic development and entrepreneurship.

For a university to become entrepreneurial, it must acquire the kind of organization that allows it to be in a state of continuous change and adaptiveness, and allows its members to be more effective. This new kind of university has two key features: transforming elements and sustaining dynamics (Clark, Burton R., 2004).

Using the triple helix model, outlines an emergent entrepreneurial paradigm in which the university plays an enhanced role in technological innovation. In this new model, a third mission of economic development joins research and development (Etzkowitz, H. et al., 2000).

There are many mutual benefits to a close relationship between a university and an industrial firm. Firms gain access to not only leading edge technologies, but also highly trained students, professors and university facilities.

Involvement of the firms in the academic programs of the universities is a major mechanism for knowledge transfer. Often students work on corporate problems for their theses and dissertations in many technical universities in Finland. Cooperative education programs, internships and job placements for students and recent graduates provide means for knowledge transfer.

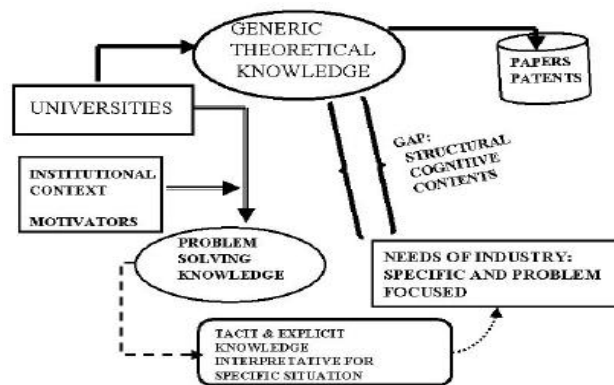


Figure 1: Knowledge Exchange between University and Industry  
Source: Alok Chakrabarti and Mark Rice, 2003

Chakrabarti and Rice present a theoretical framework based on social capital and knowledge management literatures describing the knowledge generation and transfer processes for universities.

They focus on two research questions, namely: What are the roles of universities in regional economic development with respect to knowledge generation and transfer processes and how are these role changing? and 2. How do these roles and trends differ between the U.S. and Finland?

The paper concludes that Finland has been successful in building a tripartite collaborative relationship among universities, corporations and the public agencies. In the US, some regions have attempted to do so with limited success in sustaining that effort.

In the UK, the Entrepreneurial University of the Year Award is a recognition of HE excellence in demonstrating how institutional leadership and a strong entrepreneurial culture can create the policies and practices that are conducive to the development of enterprising and entrepreneurial mindsets and behaviours throughout the organisation

The criteria used in the assessment include:

#### 1. Institutional Environment

- How has the university transformed its culture to provide environments conducive for supporting student enterprise and graduate entrepreneurship?
- How is institutional leadership for driving enterprise and entrepreneurship throughout the institution demonstrated?

#### 2. Student Engagement

- How are students and graduates demonstrating their ability to apply the enterprising and entrepreneurial mindsets and behaviours learnt through their university experiences?
- How has the student experience enhanced a positive attitude towards enterprise and entrepreneurship as a career and life choice?

#### 3. Innovative and Entrepreneurial Staff

- How have staff demonstrated innovation and growth in their approach to the design and delivery of the institution's enterprise and entrepreneurship offerings?
- How are staff incentivised and rewarded for developing excellence in enterprise and entrepreneurship practice?

#### 4. Entrepreneurial Impact

- What impact has the institution had on the entrepreneurial outcomes of staff, students and graduates?

- b. What step-change has been achieved in the delivery of regional and national entrepreneurship goals?
- c. What enterprise and entrepreneurship good practice and effectiveness has been demonstrated?
- d. In what ways has the institution's experiences influenced policy and practice in the wider environment?

### **Best practices in entrepreneurship education**

The Berger Entrepreneurship Program was approved by the University of Arizona Board of Regents in 1983 and is one of the oldest entrepreneurship programs in the country. The curriculum for the Berger Entrepreneurship Program includes core courses in competitive advantage, venture finance, market research and business plan development. Additional courses in MIS, management, finance and marketing are recommended. A combination of tenure-track and business-adjunct faculty teaches the course offerings.

Undergraduates are eligible for a major in entrepreneurship and MBA students can select entrepreneurship as an area of concentration.

Most students select joint majors and areas of concentration, such as Entrepreneurship/MIS, Entrepreneurship/Marketing and Entrepreneurship/Finance. All students receive scholarships, and many are placed in internships with newly started firms or venture capital organizations during the summer just prior to entering their formal period of entrepreneurship study.

### **Germany**

The Center for Entrepreneurship and Innovation BIEM CEIP was founded by the University of Potsdam in 2004 with the objective of grouping existing university entrepreneurship initiatives and to increase their impact. Its activities go beyond University borders and include financing partners (banks, VC, Business Angels), business support organisations and local firms. It is part of the BIEM network.

Activities:

Beyond initial information and counselling activities, BIEM CEIP is active in coaching and mentoring.

In the "Senior Coaching Services" it collaborates with Siemens AG. In 2007, the GO:INcubator, located in the Golm Science Park, was launched as a special support infrastructure for high-tech start-up projects. The GO:Incubator is part of the Potsdam Science-Cluster that includes 3 universities (University of Potsdam, HFF Film & Television Academy, University of Applied Sciences Potsdam), 3 Max Planck Institutes (Gravitational Physics, Colloids and Interfaces, Molecular Plant Physiology) and more than 20 additional research institutions. The incubator has broadly outreached to the scientific community in Potsdam. The BIEM CEIP acts as a broker and link between technology and management know-how in Potsdam.

The BIEM CEIP runs a particular entrepreneurship education programme (including innovation management), which is integrated into bachelor and master courses, and offers additional courses for post-graduates, natural scientists as well as a full MBA programme. Research is the third pillar of BIEM CEIP's main activities. Research projects focus on: Business foundation and international entrepreneurship, strategic planning, innovation process, change management and consulting, open innovation, entrepreneurship education, entrepreneurial career development (e.g. for women).

## **France**

The “Educating Entrepreneurs for the World” initiative was started by Patrick Molle, the President of the EM Lyon Business School in 2003. The initiative is part of a broader set of activities to train and support students allowing them to act as entrepreneurs, social entrepreneurs or entrepreneur managers in different geographical and cultural contexts. The educators’ team is part of the EM Lyon’s Strategy & Organisation Pedagogy and Research Unit.

**Activities.** Activities include education and teaching (seminars, Masters degree courses and extra-curricular activities), entrepreneurship research and entrepreneurship educational research, and start-up support through provision of infrastructure (business incubator), support programmes, and access to networks. 2 entrepreneurship research centres have been established and in 2008 the World Entrepreneurship Forum was held at the EM Lyon.

## **United Kingdom**

Creative Women Entrepreneurship (CWE), set up in 2007, is a postgraduate research- based initiative of the School of Entrepreneurship and Business (SEB) at the University of Essex. The aim of this programme is to increase the interest, knowledge of and competencies in entrepreneurship and innovation amongst creative female students and early stage female entrepreneurs in the creative industries.

The CWE programme is part of a rich portfolio of undergraduate and postgraduate programmes centred around entrepreneurship and innovation. It is based on ‘actionlearning’ and is divided into ‘blocks’ of studies, linked to the business agenda of participating entrepreneurs (Credits: 30/ECTS 15). The aspiring entrepreneurs learn from more experienced entrepreneurs in a confidential environment. Participants engage with each other in projects and work towards the development of international linkages with other creative female entrepreneurs. A key feature of the programme is the development of a personal development plan centred round the intellectual and emotional responses to stimuli in the wider environment.

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## **South Africa**

Entrepreneurship education at the University of the Western Cape started in the late 1980s. The entrepreneurship Stream initiative was started in 2001 by the Department for Management Studies at the University of Western Cape. It is a one-year intensive study programme that foresees student teams to start-up an on-campus micro business within 4 semesters.

Teaching includes theory, opportunity recognition, business plan development, marketing studies and business survival and growth strategies.

### Activities.

The Entrepreneurship Stream runs in 4 terms of 7 weeks each over the duration of one year.

1st term: Introduction in theory and its practical application.

The objective is to raise interest in entrepreneurship as a viable professional career and to teach first steps of business plan preparation.

2nd term: Teambuilding and preparation of intensive team working. Each team agrees in a "Charter" a set of regulations and distributes responsibilities amongst its members. A consensus-based evaluation allows team members to monitor the team's performance as well as that of individual members. By the end of the semester a business plan should be ready and contacts made with potential investors.

3rd term: The actual business start-up can be launched. The objectives are for students to gain a first experience in running a business, that they learn to identify success factors and likely pitfalls as well as short-term development and growth goals.

4th term: The teams dedicate a full semester to the development of their businesses.

### United States

Concept2Venture (C2V) was established in 2005, by Prof. Rod Shrader of the University of Illinois-Chicago (UIC) as an annual event to identify student-created business start-ups with high potential for success. This allows the university to strategically invest resources to assist students who are likely to succeed as entrepreneurs, to solicit resources from the business community, and to showcase the best work of top students. The focus is on student-created businesses.

However, students often work with professor-inventors to create companies that commercialise the inventions of professors. This had led to a special focus on biotechnology firms.

**Activities.** A one-day business plan competition is organised annually. Winners of morning semi-finals advance to afternoon finals. A formal luncheon featuring a key note address and a fast pitch contest take place between semi-finals and finals. The day ends with a reception and an awards ceremony. The event gives students an opportunity to compete for awards exceeding USD 55 000 for their business ideas (cash plus in-kind services). A series of workshops help students prepare for the day of the event.

A recent study on several German universities point out that the entrepreneurship support in universities is under development and suggests a series of directions for public policy involvement in university entrepreneurship support, including:

- *Strategy*: Public policy can facilitate the introduction of clear incentives and rewards for professors, researchers and students in order to help them to engage. This can be done by adding 'entrepreneurship support' to the list of performance criteria.
- *Resources*: It is the balance between a minimum long-term financing for staff costs and overheads and the openness to private sector involvement in the financing of Entrepreneurship Chairs and incubation facilities which proves to be successful.
- *Support Infrastructure*: Universities will need to find their place in existing start-up and entrepreneurship support systems. Networking and incentives for clear referral systems can be useful to increase the effectiveness and efficiency of start-up support and to reduce duplication, confusion and waste of resources.

- *Entrepreneurship education*: Improvement and innovation can be achieved with the help of the exchange of good practice in creative teaching methods. Universities need to have a genuine interest in such exchange, but public policy can facilitate the creation of platforms, publications, teaching material, etc. Another important area for public policy intervention is curricula development and the integration of entrepreneurship courses, such as creativity classes.
- *Start-up support*: private sector collaboration represents a key success factor for university entrepreneurship support. This way, universities can create a protected environment for nascent entrepreneurship. This can be an important stimulus for students and researchers to make a first step towards the creation of a venture. Yet, in order to avoid 'over protection', early exposure to market conditions is advisable.
- *Evaluation*: Public policy organisations and universities will need to work 'hand in hand' in developing a monitoring and evaluation system which demonstrates the socio-economic impact of university entrepreneurship support and reveals needs for changes.

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