The Role of CO-OP Model to Foster Entrepreneurship in Higher Education

Abstract

In this paper, the possible use of CO-OP education model to promote entrepreneurship in university graduates is discussed. The proposed model, named as entrepreneurship focused CO-OP (EN-COOP) constitutes of four dimensions starting from creating a knowledgebase on the student to improve innovation and creativity for a startup business. EN-COOP fills in the missing link between teaching entrepreneurship in universities and transforming ideas into real businesses by incorporating valuable entrepreneurial inputs from the real entrepreneurs of CO-OP companies.

Keywords : Entrepreneurship, CO-OP, EN-COOP

1. Introduction

Entrepreneurial spirit in university graduates increases innovation, job creation, and competition in market place (Blanchflower and Oswald, 1998). Entrepreneurial skills are the most demanded ones, where today, governments and societies worldwide seek to introduce a range of different programs and encouragement to support entrepreneurship in university students (European Comission Report, 2008; Kauffmann Report, 2008; Almeida, 2008; Menahem, 2008; Zain et al., 2010; Jones, 2008, NCGE, 2010). A recent survey conducted by European Commission (2008) about Entrepreneurship in higher education in Europe shows that European universities are significantly lagging behind at entrepreneurial activities, compared to United States and Canada universities. Same report states that more than half of students all over Europe do not have access to entrepreneurial education. The ‘growth and jobs’ Lisbon strategy of the European Comission, as measures to that, aims at reaching a capacity of sustainable growth with
more and better jobs which is directly related to promotion of entrepreneurial activities all over Europe. Generally speaking, governments all over the world see the growth of entrepreneurship amongst university graduates as a solution for a sustainable future, therefore promotes it in every possible way. On the other hand, new approaches are obviously welcomed, to increase the effectiveness of the entrepreneurship in university graduates. The unique "Cooperative Education" (CO-OP) seems to be a good candidate to enhance the entrepreneurial guidance given to university students, to transform the entrepreneurship teaching approaches at universities into a successful one, by incorporating valuable entrepreneurial inputs from real entrepreneurs of CO-OP companies. In the following sections, first, teaching entrepreneurship at universities are discussed, then a new model which incorporates CO-OP is presented.

2. Entrepreneurship in Higher Education

There are courses, programs, student clubs and dedicated offices with facilities, that enable to link entrepreneurship with undergraduate teaching. Such programs offer students the tools to be creative thinkers, be a problem solver, analyse a business idea, prepare a business plan, and moreover, communicate, lead, network and evaluate any given project. However, these efforts are not linked or more correctly to say, they are weakly linked to companies, i.e. the real world environment. Therefore, fitting entrepreneurship into curriculum in a consistent way is still a major problem (Kauffman Report, 2008; Greene and Saridakis, 2008) and currently, the teaching of entrepreneurship has not yet been sufficiently integrated into the curricula of colleges. Available courses, on the other hand, are mostly offered in business and economics studies, in such a way that, multi-disciplinary nature of entrepreneurship is mostly omitted and it is seen as part of business schools (European Commission Report, 2008).
Another problem is raised on how people perceive "Entrepreneurship". For most people, entrepreneurship is considered as a group of skills to start up a business. However, entrepreneurship can also take the form of innovative and creative activity by employees, especially in larger enterprises (Moreland, 2006).

The integration of entrepreneurship into several undergraduate courses gives an opportunity to students, at some degree, in developing entrepreneurial capacities and mindsets, but for a successful and complete transmission from an entrepreneurial spirit to an entrepreneurial behaviour, there are still more to be done. It, therefore, still remains unclear if higher education acts as a successful transmission mechanism for the promotion of entrepreneurship (Greene and Saridakis, 2008). This could be dissolved by utilizing a mechanism which supports students in every stage of the entrepreneurial transmission: from creating and shaping innovation to building up a start up. Such an approach needs dual support; academic guidance from the college, and entrepreneurial guidance with inputs from the companies. The guidance from the companies lets real entrepreneurs to be involved in the teaching and mentoring, forming an experience-based teaching environment. In fact, another model is required; where university at one side and the companies at the other, working together; it is (called) CO-OP.

3. CO-OP Education Model and EN-COOP Approach

CO-OP is a unique education model, which combines classroom-based education with work experiences, enabling cooperation and contact between university students and company professionals. CO-OP courses and seminars, offered by companies, are another means of interaction, allowing university students to experience professional life beyond books. From this point of view, CO-OP model may be used as an effective tool to enhance the entrepreneurial skills of the students, by streamlining the process of mentoring from CO-OP companies and academic
knowledge from the university. This approach may be considered as an entrepreneurship focused CO-OP (or, EN-COOP). Most CO-OP programs work with the understanding that advisers at university side and mentors/supervisors at company side are together to promote a nurturing environment for the students (Parsons et al., 2005). Meanwhile, in the entrepreneurship focused CO-OP approach, a new extension is made to the company and university joint work: planning the activities to enhance entrepreneurial skills and raise awareness on the CO-OP student side. This approach requires using a set of tools both on company and university side.

The proposed EN-COOP constitutes of four dimensions:

1- Creating a knowledgebase on students to improve innovation and creativity,
2- Teaching theory of the inventive problem solving (TIPS) techniques,
3- Guiding students in creating their own ideas,
4- Helping students to start up business.

In the first dimension, CO-OP companies and university work together to improve student’s understanding on the future demands of the market. Second dimension is about teaching approaches to the invention of new systems, and the refinement of existing ones. Third dimension contains a lot of guidance and mentoring of the student on the university and company sides. In the fourth dimension, students learn how to create startup companies. All of the four dimensions do require joint work of the university and CO-OP companies in harmony. Four dimension model aims at giving students the opportunity to develop their own entrepreneurial skills, with the mentoring support from the CO-OP company and academic knowledge from the university. This model should be considered as not only a stand-alone model, but a complimentary model to enhance the effectiveness of any entrepreneurship program with a CO-OP extension.

3.1. Creating a Knowledgebase
Entrepreneurship is generally considered as a process of developing an innovative idea, where later transforming it to an enterprise, or use this idea in an existing company to generate a new product, and finally obtain a value. Developing an idea and matching it to the needs of the current market and sector requires knowledge of current status and future demands of the market and sector. Only then, the understanding of students will be improved, for shaping their innovative ideas in a solid way. This proposed model recommends the introduction of current and future market trends to students, through giving seminars; that is best to be done by CO-OP companies. Students who take the entrepreneurial course(s) attend those seminars to create, and then enhance their knowledgebase for creating innovative ideas. Seminars from different sectors give a broader view to the student.

3.2. Teaching Problem Solving Techniques

Invention of new system is usually the first step of the entrepreneurial spirit. Each entrepreneur has to have an adequate innovation capability. Innovation capability is defined by Kim (1997) as the ability to create new and useful knowledge based on previous knowledge. A powerful innovation capability can easily contribute an efficient and effective entrepreneurship. Students who have an understanding of the current and future trends of different sectors are required to use their entrepreneurial mindset to develop innovative ideas. Transforming ideas to a successful business requires to deal with problems arising from many aspects such as manufacturing, marketing, competition with the other players in the market, legal issues etc. These are mainly characterized as complex problems. In this context the ‘Theory of Inventive Problem Solving’ becomes more popular, because many complex problems cannot be solved by conventional solving methods or techniques. Many experts feel confident about the application of TIPS to entrepreneurial problems. TRIZ (the acronym for "Theory of Inventive Problem Solving")
in Russian) is the most popular approach for the inventive problem solving. TRIZ is a powerful methodology, based on empirical data that can provide solution concepts for a wide range of problems which was developed by Genrich Altshuller in 1946. Altshuller defined an inventive problem as one containing a contradiction. TRIZ tools could be applied to the technical and non-technical problems . (Mueller, 2005). Students who know TIPS methodology will find better and quick solutions for the problems he/she may face with during the transformation of the idea to the business. Our recommendation is to give these concepts in a course format to the student.

3.3. Guiding Students in creating their own ideas

The core of the EN-COOP model is a body (EN-COOP Center) which resides in the CO-OP structure. This body, which is founded with the initiation of university and COOP companies, will function as the guidance and mentoring body, to follow and guide the student through the process of creating and developing new ideas, and putting them into life.

During the process of acquiring the approaches of invention of new systems, the student will start formulating some innovative ideas, for which he/she needs guidance. The tutor, upon realizing of the emergence of new ideas, will direct the student to EN-CO-OP Center.

Once the student is directed to the Center, he/she requires to define his/her innovative idea in a business plan with the help of the Center. Business plan will reflect all aspects of the innovative idea to become a successful business. Then the business plan will be evaluated according to four steps: i) self awareness of the student in terms of entrepreneurial spirit, ii) the quality of innovative idea and framework, iii) quality of the deliverables, and iv) necessary tools for start up.

In order to foster entrepreneurial skills, guidance and mentoring may start only upon definition of these four criteria. The process of definition is carried out by counselors/advisors,
within the Center. Self awareness is measured by applying a questionnaire to the student and other criteria are evaluated according to the project proposal.

Once assessment of all criteria is done, based on the grading, a spider map is drawn as shown in Figure 1. This map shows the areas he/she has competence and how much need he/she has got for mentoring. EN-COOP Center decides whether students should be supported or not. The criteria for acceptance and rejection should be definite as a center policy. After defining the needs, the long process of guiding and mentoring may begin.

![Figure 1. Student's Entrepreneurial Competence Map](image)

### 3.4. Helping Students to Start up Business

The counselor links the student with mentors from relevant sectors, targeting all four criteria. Based on the needs, separate mentors may work with the student on each criteria; targeting its indicators.

The process of mentoring starts with filling up the gaps in the spider map and lasts until the student puts the idea into a solid form, the so called startup. The start up may be in a form of company, investment within another body or an invention. The option to be followed is decided by the owner of the idea: student. Student may decide to make a joint venture with one or more of the companies. Despite the form, the EN-COOP system is there by the entrepreneur through
the formulation, self preparation, idea development and realization. Mentors will follow the entrepreneur until s/he get to a certain level of acceleration. The form of the startup is decided by the owner of the idea: the student. The student may decide to make a joint venture with one or more of the companies o

4. Conclusion

It is obvious that new systematic approaches are necessary to have more entrepreneurs for creating new jobs and new opportunities. Individuals who have the ability to generate new knowledge from the existing ones, tend to have entrepreneurial mindset and become a major player in the industry.

Between 1950 and 2000, university-industry collaboration became a successful model that drives the advancement of the industry. CO-OP education model, on the other hand, has been one of the most effective and unique approaches in terms of meeting university and corporations. Traditional CO-OP companies mostly deal with placing students into job positions and seeking future employees for themselves. This can be stepped further ahead: The CO-OP companies, as successful examples of entrepreneurship, have the potential to shape the transmission of entrepreneurial skills in university students, leading and guiding them to product creation. On the other hand, CO-OP companies will be benefitting from the innovative ideas coming from the university students in one of the forms explained in 3.4.

The model we described in this paper gives a unique conceptual approach for developing entrepreneurial skills of the university students, forming an idea and transforming it into a successful business start up within the CO-OP framework. The steps defined here gives the milestones of the EN-COOP approach, where an implementation guideline is definitely needed to realize the whole framework.
References


