

Entrepreneurship Road Show – Promoting Entrepreneurship At Engineering Universities

Hyötynen, P¹

Advisor, Education and Employment Policy Academic Engineers and Architects in Finland, TEK
Helsinki, Finland

Kivioja, M

Advisor, Industrial Policy
Academic Engineers and Architects in Finland, TEK
Helsinki, Finland

Conference Topic: Entrepreneurship of Employability

1. INTRODUCTION

Academic Engineers and Architects in Finland – TEK is a service and labour market organization for highly educated professionals in the field of engineering and technology. Most of the 73 000 members hold a M.Sc. degree in engineering, technology, architecture or natural sciences. 21 000 are university students studying those fields.

In addition to labour market issues, TEK is active in the development of engineering education on national as well as international scale. One of the topics TEK has been focusing on lately is promoting entrepreneurship. It is recognized that in the future more and more engineers will be employed by small and medium sized companies or may have to be able to create companies of their own. TEK therefore works towards enhancing entrepreneurial skills of engineering students as well as working professionals. One of the recent actions includes a campus road show in universities of engineering education that was organized in six universities during a time period from March 2013 to January 2014. This practice paper presents the targets, concept and results of the tour.

2. TARGETS OF THE ENTREPRENEURSHIP ROAD SHOW

In 2012 TEK conducted a master thesis study¹ aiming to evaluate the current state of entrepreneurship education in Finnish universities of technology and offer tools to develop it. One of the main targets of the road show was to distribute the results of this study. Alongside this, the target of the events was to promote entrepreneurship in general and network people interested in entrepreneurship. The workshop style events brought together teachers, students, professionals and other stakeholders interested in entrepreneurship to share knowledge, ideas and best practices.

The road show events were organized in close cooperation with the universities and student entrepreneurship societies, local entrepreneurship stakeholders and individual entrepreneurs. To have real life entrepreneurs as speakers was considered vital for the content and marketing of the events. The main concept was similar in all road show events. The events included presentations, working group sessions, common discussion and networking dinner. The input was reported in a form of best practices or most crucial challenges. The participants appreciated especially the following: a chance to network with people interested in entrepreneurship, peer support and encouragement for entrepreneurial career, and best practices on how universities can develop entrepreneurial skills of students.

2.1 MASTER THESIS STUDY ON ENTREPRENEURIAL CAPABILITIES

“The Development Of Entrepreneurial Capabilities In Higher Engineering Education. A Case Study On Aalto University, Lappeenranta University Of Technology And Tampere University Of Technology” (Marko Oksanen, Aalto University, 2012)

¹Oksanen

TEK sees that entrepreneurial attitude should be a part of higher technical education in many ways. Therefore TEK conducted a study with the objective to evaluate the current state of entrepreneurship education in Finnish universities of technology and offer tools to develop it. The study defines what are the abilities required for entrepreneurship and how these abilities can be learned. The current state of entrepreneurship education was researched by using case study methodology, where cases were Aalto University, Tampere University of Technology (TUT) and Lappeenranta University of Technology (LUT).

The most important conclusion of the study is that defining entrepreneurship solely in the context of starting and running a business limits students' possibilities to learn entrepreneurial action. Only a few students have the will or the possibility to practice entrepreneurial action, if it is defined in the context of starting a business. Preferably, entrepreneurship should be defined as entrepreneurial actions that can be practiced in several different contexts. Universities should support students' opportunities to practice entrepreneurial action. Offering possibilities requires co-operation between entrepreneurship education stakeholders. Universities must empower companies, teachers, students and the university management together to plan and develop the learning environment for learning entrepreneurship. Co-operation requires the planning and communication of clear objectives for entrepreneurship education.

The study lists concrete suggestions of operation for the case universities. It is suggested that entrepreneurship should be taught in different phases where entrepreneurship is firstly taught broadly as entrepreneurial action in any context. As students learn to better understand what entrepreneurship is and learn skills for acting entrepreneurially, entrepreneurship can be taught in a more specific context (as eg. business or new venture formation).

3. CONCEPT OF THE ENTREPRENEURSHIP ROAD SHOW

In order to spread and communicate the results of the master thesis study to the universities, TEK organized a road show in universities of engineering education. Alongside creating discussion on the state and development of entrepreneurial education, the target of the events was also to promote entrepreneurship and entrepreneurial career in general. The workshop style events brought together teachers, students, professionals and other stakeholders interested in entrepreneurship to share ideas and best practices.

The road show events in six campuses were organized in close cooperation with the university and student entrepreneurship societies, local entrepreneurship stakeholders and individual entrepreneurs. To have real life entrepreneurs as speakers was considered vital for the marketing and the content of the events. The main concept was similar in all road show events, without forgetting the interests of the local partners. The entrepreneurs for example came from local companies.

The 4-hour events consisted of the following:

- Presentations from TEK (presentation of the M.Sc. theses study and how TEK promotes entrepreneurship and entrepreneurial career in general)
- Presentations from university representatives (e.g. plans or actions taken to enhance entrepreneurial skills in engineering education)
- Presentation of student entrepreneurship societies or other actions organized by students

- Entrepreneur career cases and possibly other stakeholders as speakers.

Work group sessions where participants were gathered in small groups to discuss topics such as: development of education, ups and downs (attractions and challenges) of an entrepreneurial career, and expectations towards TEK as a professional organization.

- The events ended up with common discussion and cocktails/buffet dinner.

The input of the working groups was collected and reported in a form of best practices or most crucial challenges. All materials (programmes, presentations and summaries of each event) are available at the road show web page (www.tek.fi/roadshow).

TEK was responsible for the overall organization and costs of the road show events. Costs were very moderate as the events mostly took place in the campus facilities. Recruiting speakers and marketing was made together with the student organizations, representatives of the university and local entrepreneurs organization in order to reach all the target groups and interesting speakers. In addition to personal contacts and email lists of key target groups, social media (eg Face Book) was used in the events marketing.

The Entrepreneurship Road Show events were organized at these locations:

- University of Turku (March 2013)
- Lappeenranta University of Technology (September 2013)
- Aalto University (October 2013)
- Tampere University of Technology (October 2013)
- University of Vaasa (November 2013)
- University of Oulu (January 2014)

4. RESULTS

Based on the feedback, the participants appreciated especially the following: a chance to network with people interested in entrepreneurship, peer support and encouragement to become an entrepreneur and sharing best practices on how universities can develop entrepreneurial skills of students.

The presence of TEK at the campus and initiative to promote entrepreneurship was also recognized as positive. However, TEK is mostly seen as a union representing employees but not so much as an organization for entrepreneurs. Participants wished for more services for entrepreneurs and TEK to be active in promoting entrepreneurial career in general in the Finnish society (e.g by influence taxation and other legislation).

The role of university to promote entrepreneurial competencies and entrepreneurship was worked on in all the road show events. A list of top best practices and mostly discussed topics:

- Promoting entrepreneurship and entrepreneurial competencies has been clearly recognized as a target by Finnish universities. However, a lot needs to be done still. The universities could for example steer and promote spin-offs and commercializing of innovations more effectively.
- A lot is already being done, but universities could be more strategic on their entrepreneurial actions. For example, a systematic listing of all the different parties and forums active in entrepreneurship could be made.
- The commitment of university management is essential in promoting entrepreneurial education. Otherwise entrepreneurial competencies will most likely be learned by a small group of "true believers", but the majority of students are not exposed.
- Studies should support the self-confidence of students as well as the capability and courage to try out new things.
- The real life entrepreneur cases are a must in lectures, but more importantly the university studies should in general support initiative and self-confident attitude of students.

- This type of teaching requires investing in development of teaching methods, environments and pedagogical competencies of teachers.
- A typical challenge in universities: only research achievements are recognized in the academic career, not teaching achievements.
- Universities should better take advantage of their role as facilitators bringing together people with different back grounds and competencies. Collaboration between disciplines or fields of technology should be encouraged.
- Students (entrepreneurship or other) societies or clubs are great places for students to collaborate, take responsibility and learn to act entrepreneurially. This potential should be recognized and supported also by the university.
- Team working, project learning and problem based learning are good ways to promote entrepreneurial competencies.
- Collaboration with companies should be encouraged. Small and medium sized companies especially should be looked at. They can often offer a range of projects or assignments and would most likely benefit of collaboration and research resources offered to them by university and motivated students.
- **It is essential to create the "Yes, I can!"- attitude in students. The sooner the better.**

5. CONCLUSIONS AND ACTIONS FOR FUTURE

The Entrepreneurship Road Show was seen as a successful action. The results of the recent master thesis study on the state and development needs of entrepreneurship education were distributed and discussed by different stakeholder groups. Most importantly forums of discussion on entrepreneurship education and networks of people were formed. Creating entrepreneurial attitude takes time and effort, but will be done in small steps by building networks of devoted people.

TEK plans to continue promoting entrepreneurship and entrepreneurial competencies among engineers. One of the actions in near future include creating a web page/portal to promote entrepreneurship education. The web page could comprise of the following sections:

- **What** is the state of entrepreneurial education (largely based on the master thesis made)
- **Why** is it necessary to develop entrepreneurial education (requirements of the future job market, where especially the role of small and medium sized business will increase). What are the most important skills and competencies needed?
- **How** can engineering education better develop those skills and competencies?
 - o List of best practices and case examples carried out in universities

TEK is currently creating more services for its entrepreneurial members. These include for example a LinkedIn group and a mentoring programme for peers, as well as training and courses on entrepreneurship done together with other Finnish unions or professional associations for highly educated professionals. Also, the services of an attorney specialized in entrepreneurship are now available for TEK members.

REFERENCES

Oksanen, M. (2012): The Development Of Entrepreneurial Capabilities In Higher Engineering Education. A Case Study On Aalto University, Lappeenranta University Of Technology And Tampere University Of Technology, Academic Engineers and Architects in Finland – TEK, Helsinki,