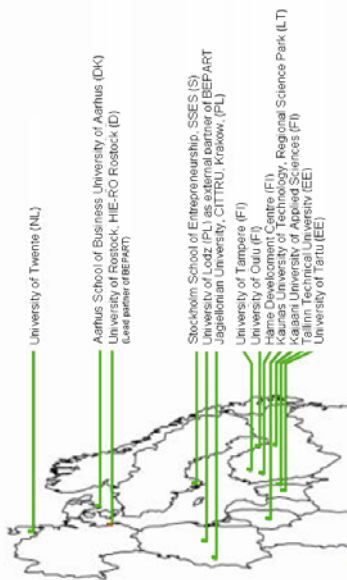


Entrepreneurship Teaching & Promotion at and by Universities

10 Cases Interreg III C Network Project BEPART

(7/2004 – 12/2007; pdf by 15 Dec. 2007)



Partners of the BEPART Network



Denmark: Århus School of Business/ University of Århus



Estonia: Tallinn Technical University
Estonia: University of Tartu



Finland: Häme HAMK University of Applied Sciences
Finland: Kajaani University of Applied Sciences (2 Cases)



Germany: University of Rostock with HIE-RO



Lithuania: Kaunas University of Technology



Poland: Jagiellonian University Krakow, CITTRU (2 Cases)



www.bepart.info



Content

| | |
|--|-----|
| Århus School of Business – University of Århus (Denmark) Entrepreneurship – From Opportunity to Action – The Entrepreneurial Process <i>Poul Dreisler</i> | 3 |
| Tallinn University of Technology (Estonia) Tallinn School of Economics and Business Administration A Case of Teaching Business Planning <i>Urve Venesaar, Ene Kolbre</i> | 25 |
| University of Tartu (Estonia) Master Program in Entrepreneurship and Technology Management: Evaluation of the Successful Initiative in Estonia <i>Janita Andrijevskaia</i> | 30 |
| HAMK University of Applied Sciences (Finland) Competence-based Entrepreneurship Model Entrepreneurship Incubators at HAMK University of Applied Sciences <i>Seija Pajari-Stylman, Heikki Hannula</i> | 40 |
| Kajaani University of Applied Sciences (Finland) Promoting Entrepreneurship in Kainuu Entrepreneurship Path Cooperation Model <i>Päivi Malinen, Päivi Partanen</i> | 47 |
| Kajaani University of Applied Sciences (Finland) Business Planning 3 ECTS (Business Plan) virtual based web – course <i>Pekka Tervonen</i> | 54 |
| University of Rostock & HIRO (Germany) ROXI Entrepreneurship Training Programme <i>Doreen Holtsch, Melanie Hoppe</i> | 74 |
| Kaunas University of Technology, Regional Science Park (Lithuania) Importance of the Programme of Entrepreneurship Training and Motivation for Young Innovative Companies: KTC Case <i>Rimantas Venskus</i> | 100 |
| Jagiellonian University, Kraków, CITTRU (Poland) How to Take Off? <i>Jacek Klich, Jerzy Rosiński</i> | 125 |
| Jagiellonian University, Kraków, CITTRU (Poland) Teaching Negotiation Skills University Model Based on Entrepreneurial Experience <i>Jerzy Rosiński, Jacek Klich</i> | 138 |

Editorial work: done at the University of Rostock, Chair of Business & Entrepreneurship Education (Wirtschaftspädagogik)

Publication made within the project activities of BEPART – Baltic Entrepreneurship Partners, part-financed by the EU, Interreg III C.

All information herein reflects the authors' view only; the EU and related organizations are not liable for any use that may be made or not be made of the information.

BEPART Case – Aarhus:
Entrepreneurship – From Opportunity to Action –
The Entrepreneurial Process

Poul Dreisler

Department of Management
Aarhus School of Business / University of Aarhus
Haslegaardsvej 10
DK 8210 Aarhus V
Tel.: +45 89 48 64 64
Fax.: +45 89 48 61 25
e-mail. pd@asb.dk

Keywords:

education, pedagogy, didactics, learning, teaching, university context, entrepreneurial university, entrepreneurship, enterprising behaviour.

1. Executive Summary

This case will describe a specific course organised in accordance with the entrepreneurial process model. The course is conducted by a teacher who is nearing the end of his 20-year-long involvement in the subject field. The case starts out with a review of some of his experiences, to demonstrate that there is a schism between didactics, pedagogy and context in relation to the subject field. It is postulated that entrepreneurship has not found an "intramural" place at Danish universities but to a very large extent remains "extramural". This leaves the universities free to ignore the much-needed development of teaching methods, which, in essence, constitute the internal logic of the subject field. It is further postulated that the concept, or term, entrepreneurship is its own worst enemy, because it is so easy to either reject or isolate it as there is no tradition, scope or resources available to implement the learning processes which are inherent in entrepreneurship and which ought to be universal. Finally, there will be some thoughts on how teaching could be organised, based on an understanding of 'enterprising behaviour' and the 'entrepreneurial university'.

2. Background

2.1. Introduction

My background section is no doubt a good deal longer and more historical than expected. I have wished to include a (far from exhaustive) outline of the development in this area, which I have been a part of from 1989 to the present day. There are many positive elements in this historical outline, but also many examples of opportunities wasted.

2.2. An inter-institutional cooperation

In 1989 an informal cooperation was initiated between teachers from three HE institutions in Aarhus – the engineering college, the school of architecture's institute of industrial design, and the business school, ASB. The teachers decided to set up mixed project groups for their students to carry out projects in what was then called "product development". The cooperation was initiated quite informally and implemented by teachers. A teacher at the school of architecture came up with the idea; it seemed to him that his students lacked any understanding of what it was that made Danish design world-famous in the years between 1930 and 1970. His students considered themselves to be artists, working for the sake of art only, as he put it. What was missing was the traditional cooperation with furniture makers and production people in general, to make them realise what was the exact purpose of their own work. He therefore contacted the other two institutions, starting a cooperation still existing today; however no longer with ASB as a participant.

Since then, so many things have happened that a brief outline is called for, to explain the situation which forms the background for the way the subject area entrepreneurship is being taught.

2.3. From product development to innovation and entrepreneurship

In the next few years, the perspective of the subject area changed into "innovation and entrepreneurship". These two concepts were acquiring a special status as a number of influential players sought to further an emerging trend in society. Among other things, the rectors of the HE institutions, representatives from the local authority and the county along with the private institution Danish Technological Institute had visited Chalmers University of Technology in Gothenburg and learned about their successful initiative of offering graduate engineers courses in entrepreneurship just before they left the university. Though greatly inspired by the visit, they failed to reach any agreement on how to implement the idea in Aarhus. So it was parked in the Centre for Business Development (CBD), an office for business services run by the county. Each HE institutions, the ones already mentioned plus the University of Aarhus, appointed a representative. At twice-yearly meeting they discussed developments and how to promote entrepreneurship at the individual institution. CBD offered courses in entrepreneurship at the university, the engineering college and the school of architecture, which was given additional funds for its own initiatives. ASB declined the offer as it was felt that the school was capable of developing and implementing this subject area on its own. This resulted in the course "Innovation & entrepreneurship", which has been offered ever since as part of the bachelor programme, alongside the inter-institutional projects mentioned above, referred to as TIP projects. The course was organised so that students could take the course in their 5th semester, then choose a TIP project cooperating with designers and engineers for their bachelor thesis in their 6th semester. But the teachers involved never succeeded in having a formalised framework set up, which meant that the process was difficult to manage, and not always a success. The Danish Rectors' Conference nevertheless granted approx 60,000 euros in 1993 to support the initiative, in order to further inter-

disciplinarity. In 2003, ASB left the cooperation because it proved difficult to keep to the original idea alive once new teachers took over. Only one teacher from ASB was ever involved in the cooperation, and nobody else was willing to take over his commitment and hard work.

2.4. Promotion of entrepreneurship

The meetings in CBD did not lead to more cooperation, as CBD had its own reasons for offering courses at the institutions. The courses were part of their business foundation and a means to attract funds from the initiatives set up by the Danish government. In 1995 the government launched a massive campaign to promote entrepreneurship. It did produce some results, but not in any coordinated way, usually as a result of a few passionate individuals' hard work and dedication. Some, but not a lot of progress was made up to 2000. In 1999 ASB started a master programme in "entrepreneurship", run jointly by teachers from the University of Aarhus and ASB, and a course in "Creativity and innovation management" was offered at the master programme. Since 1989 very few staff members at ASB have been involved in research on entrepreneurship. In 1997 a research group called RESME (Research on SMEs and Entrepreneurship) was established, including researchers and teachers from other universities and HE institutions.

2.5. Study tour to the USA

However, 2001 finally marked a real change. The head of CBD, who had lived in California for 18 years, organised a study tour to the USA for the members of the working group meeting twice a year. The tour included visits to Stanford and Seattle University, Entrepreneurship Centre and a number of other places. It was during this trip that the idea of establishing a centre in Aarhus comprising all HE institutions and supported by the county and local authority was formed: "Aarhus – one campus for entrepreneurship". The idea sprang from the fact that all relevant HE institutions in Aarhus are located within a geographical area roughly the size of the campus of Stanford University. So why not operate as a single joint campus to promote entrepreneurship? To make a very long story short, the idea was presented at a meeting in 2001 (shortly after the study tour). It was immediately taken up by the administrative head of the county's business section. In a very short time he managed to raise close to 800,000 euros from the EU's Social Fund, whose administration was also placed in his organisation, and he managed to raise an equivalent sum from other sources as a grant to finance Center for Entrepreneurship (CFE) www.au.dk/da/cfe/forside for three years, starting on 1 January 2002 and expiring at the end of 2004.

2.6. Center for Entrepreneurship

But the flying start was followed by a long and incredibly complicated process of negotiations: it soon emerged that there were many different agendas involved here. One of the most important turned out to be that the head of the county's business section needed to cut his staff and budget and saw the CFE as an opportunity to place his staff elsewhere, in an institution pursuing a good cause, and outside his budget. The teacher/researcher representatives from ASB and Aarhus University wanted the centre to be managed by the six HE institutions in Aarhus, and to be based on both research and education. They found that what was being suggested was far from the idea born out of the trip to the USA. The ensuing struggle went on and on until August 2002. CFE was officially opened on 1 December 2002 – one year into the budget period! The management of the centre was placed in the hands of staff from the county, and an academic council consisting of teacher representatives from the by then six institutions associated was set up. The centre attracted an impressive board, made up of the rectors of

six institutions and executives from the local authority and county departments for business development. A number of adjustments were made over the next two years but nothing that changed the fundamental state of affairs. The centre had many visitors, who were, however, often disappointed because the centre was not what they expected, a centre for research and education. There was no agreement on the direction in which the centre was supposed to develop. In the end, the centre was made part of Aarhus University, governed by its rector as an ordinary staff function, disconnected from both the university's research and education in the subject area. The centre is today an integrated part of Aarhus University and has started offering credit-earning courses, usually in connection with programmes offered by the university's institutes. The vision statement has also been changed. Now it says: "It is the vision of the CFE to develop and support an innovative enterprising culture and credit-earning enterprising competences at the University of Aarhus". Today, the centre has no importance for the development of entrepreneurship in education at ASB.

2.7. Yet another informal inter-disciplinary and inter-institutional cooperation

This long historical background has been included to illustrate the basic idea that has always been the driving force behind all development of subjects and courses for the person(s) responsible for this type of courses: that inter-disciplinarity is vital when teaching entrepreneurship. As mentioned, this course was launched as a cooperation between two teachers from the university and ASB, involving students from the many institutes and subject areas covered by the two institutions. For example students from the Institute of Molecular Biology, who took the course (as well as "Creativity and innovation management") as part of their study programme. Later another teacher joined the cooperation, bringing in additional students from the humanities (Institute of Information and Media Studies). This cooperation ran for three years, until the two university teachers were asked to promote education in entrepreneurship at some of the university's other humanities educations. For the last two years, the course has been offered at ASB with an intake of 40-50 students a year; in 2006 students from ASB as well as other universities and HE institutions in Jutland, in 2007 students from ASB only. The course is elective and open to students from all programmes offered at ASB. From 2008 all three courses, which have been offered since the very start, will close down when the teacher retires. Only a single new course in entrepreneurship has been established, and there will be some general support (coaching) for students wishing to pursue this as a career path. In addition, ASB is attached to IDEA (International Danish Entrepreneurship Academy) www.IDEA-Denmark.dk, which is a large-scale initiative seeking to promote entrepreneurship. Among other things, they are trying to promote a master, IMEET (International Master in Entrepreneurship Education and Training). But apart from that, IDEA has had little influence on teaching or the development of courses at universities.

2.8. Inter-disciplinarity is formalised

Over the past two years, a lot of resources have been devoted to restructuring the universities in Denmark. ASB has merged with Aarhus University, for example. The restructuring is the result of some degree of political pressure on HE institutions, in an effort to create new constellations in educational development and critical mass in research. To give a very recent example, the Dean of ASB has just signed an agreement establishing a combined education allowing engineers to add a master degree at the ASB, based on courses like Management of Innovation and Technology.

3. Case Description

3.1. Educational approaches and teaching methods

The course "Entrepreneurship – from opportunity to action – the entrepreneurial process" is described in detail in the appendices. The appendices have been arranged in the order in which the student will meet them before and after choosing the course. First there is a course description, then an introductory letter to the students, a plan and a description of the activities the student must take part in, and finally a list of literature.

All courses taught at ASB must be described in detail in a course description outlining all aspects of the course, to enable students to decide whether a course seems interesting or useful for their career plans. Additionally and importantly, the course description is also a declaration in the legal sense, informing the students of what to expect and what is expected of them. A new requirement was introduced in 2007; students must now also be informed about the demands to be awarded the highest grade (12) and the minimum demands to pass the exam (grade 2). The scale for grading must use the descriptions of these two extremes as the basis for the grades in between (see course description appendix 1).

Previously the course has been conducted with several teachers at the same time, which tended to be difficult, especially since a former colleague was very fond of lecturing – sometimes for up to 3 lessons of 45 minutes. The way the course is organised now there are no lecturing – at least not by the teacher. The students work in groups, and it is part of the group's duties to present a given text and, most importantly, to demonstrate that they have not only understood it but are also able to see their own practical project in the context of the literature studied. Quite often only a few of the other participants will have read the text before classes, but afterwards they will have an overview of it and know in which contexts it might be useful for them as well. This is evident later when they write their report, which to a large extent includes the literature presented in class.

The course is dimensioned to give 10 ETCS, which amounts to approx 33% of the students' workload in a semester, including the time spent in class. The basis for this calculation is that the classes and the project work represent the workload that the students must organise themselves within the framework set out in the plan. If classes finish early one day, that means extra time to work on their own project or consulting the teacher, who is also available for mail or phone consultation (see requirements for student activities in appendix 4).

The philosophy underlying this view is self-evident. Professor Helge Löbler, University of Leipzig, has an amusing metaphor to illustrate this point. Using what he calls a constructivist approach (Löbler, 2006), he takes his starting point in the differences between dogs and cats, referring to dog teaching and cat's learning to present his views on entrepreneurial education. "The classical teaching approach is dog teaching and this approach does not work for cats. But the constructivist approach is supporting cat's learning". This distinction between teaching and learning is presented and elaborated on at the meeting introducing the course. Obviously a certain knowledge of how cats and dogs behave is necessary, but it is easy to find examples. Dogs do as they are told to do, and enjoy doing it. Cats do what they think is sensible for them to do and learn from their actions, in contrast to dogs, Dr Löbler says.

The introductory letter is also discussed at the first meeting. Not everybody will have replied, but many will, making it possible to form an impression of what the students expect from the course. The majority expect a combined theoretical and practical approach to entrepreneurship. Some attached more importance to the practical aspects, perhaps expecting this to be the easiest way to succeed, which turns out to be far from true.

The course, its methods and contents is based on three essential concepts or philosophies. They are a) enterprising behaviour, b) the entrepreneurial process, and c) the student's self-knowledge of their own competences in relation to carrying out entrepreneurial processes. As for a), it is the course's objective to further the behaviour described in the course description (appendix 1 Performance measurement). As for b), the objective is that the student learns the entrepreneurial process, as it is described under Main topics. It is not a requirement that a business plan is drawn up. This phase is not part of the course as such; the important thing is that a business idea is developed, and that the concept of opportunity is fully understood. And finally it is essential that, under c), the students are able to identify complementary competences needed for the execution of their idea. This is where the original inter-disciplinary element comes in. It is a requirement, and a necessity, that the students seek help and knowledge in areas where their own competences are insufficient. Groups formed voluntarily tend to be fairly one-sided in their professional orientation, and it is usually evident that this kind of parallel thinking is not the most productive.

3.2. The process to set up a coherent course and curriculum

The structure and content of the course has been described in appendix 3. The plan gives the students all the information they need, allowing them to concentrate on their project work based on literature and search for complementary competences. A very efficient and useful element of the plan is the ASB intranet "CampusNet", which is an excellent tool for communication and for making articles, reports and other material available for the teacher and the other students. As can be seen in appendix 5, a so-called electronic compendium or collection of articles forms part of the curriculum together with the two textbooks used. All study material is put on CampusNet, and the students make their PowerPoint slides available here too. The teacher can add any material he finds useful and can send mails directly to all approx. 50 students. There is also a list of links to potentially useful institutions in the area. As can be seen, the plan and CampusNet constitute the technical basis for the process, and once in place requires very little extra effort.

The course is based on a model developed by Scott Shane (2003), presenting his understanding of the entrepreneurial process. The model explains the process in the following elements: Individual attitudes, environment, entrepreneurial opportunities, discovery, opportunity exploitation and finally execution. Not all elements are equally prominently in the course, e.g. not environment as it is assumed that students at this level will be able to study this on their own. Execution is not always the most important goal either. Students differ in their preferences; for some this is the most important element, especially if they have a burning desire to start their own business. For others, the most important is to work with the elements of the model and the course that relate to Individual Attributes and Opportunity, which is where the business idea unfolds and is tested.

The course is not a course designed to prepare the students to start their own business when they graduate. As stated before, the emphasis is on enterprising behaviour. This means that students will be favourably disposed towards entrepreneurship.

This model provides an excellent guideline for the progression of the process. After the first meeting introducing the course, the students have no problems accepting the roles assigned to the teacher and students. The following classes are organised so that each session has two student presentations of about 20 minutes, including a short overview of the main topics of the week's literature as well as an application of these topics on their own project. Then follows a discussion of the issues raised in the presentation or relating to the topic in general. The discussion is lively, involving the entire class. The role of the teacher is to facilitate the discussion, if necessary, and to clarify any questions arising. The plan allows 2 lessons of 45 minutes for these activities; sometimes they take up all the time, and other times there will be some time left for individual consultations on the project or other questions.

As can be seen in the plan, three times students have to hand in papers on their group's project work (via CampusNet). The first relates to the idea or the topic of the group's work, indicating their own competences and interests, and including a brief outline of the next steps (1-2 pages). The teacher gives summary feedback on this, helping the students to decide either to continue with the project or reconsider it. Great importance is attached to the feasibility of the project and to the question whether the competences needed for its execution are available.

The second paper to be handed in is about 5 pages, indicating the contours of the finished project. It is usually at this stage that the need for help is greatest and the sustainability of the project needs to be discussed. Feed-back is given in a workshop-like session, after all students have had a chance to look at all projects in the folder at CampusNet to comment or offer advice. This class session is longer, lasting 4 lessons of 45 minutes

Finally there is a last session shortly before the end of the course, which is mainly a chance to discuss whether or not to expand on this or that aspect, or to clarify the final structure of the written report etc. All questions on the substance of the project should have been dealt with at this stage - hopefully. This session is organised as described above; the only difference is that there are more pages to look at.

The final report handed in by the students, and the basis on which the grade is given, is about 15 pages times the number of students in the group - between 2 and 4, on average 3. Up till now, the exam has consisted of the teacher reading the report, giving a grade, and that was the final word. At times students have wanted to have their grade explained, and once explained, that was usually it; most students have a fairly accurate sense of the quality of their work. This exam form has now had to be changed, as group exams are no longer allowed. All students must be evaluated individually, at an oral exam. As the course would have no point whatsoever unless it leads to a written group report, the exercise has been to construe an oral exam that makes sense. So now a group report is to be handed in, and each member of the group will then be examined individually and orally in the report. The report is to be considered the curriculum, and all group members must be able to answer questions on anything in the report, including why some aspects have not been dealt with. The students will also be expected to answer general questions on the literature used as the basis for the report. The new exam form has not been tried yet. There is an ongoing struggle between the universities and the minister in charge to reverse this change, because it undermines the basis of many courses and teaching environments that have been highly successful exactly because the students work in groups, which, it is argued, is the natural choice since it simulates the work form students will encounter after their studies. But so far, unfortunately, to no avail.

3.3. Theoretical background for the process

The background for the pedagogical process is primarily Kolb's learning cycle describing a process which begins with concrete experience and goes over 'observation' to 'reflection' and further on to 'forming abstract concepts', ending with new situations. Kolb says (see Blenker et al 2006 pp 102-104) that the learning cycle is not really a circular process, but rather "that it is a matter of a cyclic spiral: firstly, it is often necessary to go through the four stages several times in order to fully understand the general principles. Secondly, it is more than a cycle, because you continually progress into a more profound discerning of the problem dealt with – as opposed to running in circles. Thus, learning to learn seems an important aspect in entrepreneurship since an entrepreneur frequently deals with entirely new business concepts and therefore cannot always seek advice or guidance in his network. Hence, it is necessary to experiment on your own; and it is far from certain that your initial, immediate understanding of the situation and the ensuing proposal for a solution will be accurate. You develop experience, and you learn to learn".

In addition to recommending a cyclic experience-based learning process, the model can be expanded to encompass a representation of the way different people adopt different learning styles.

The cycle illustrates the four learning styles: concrete experience, reflective observation, abstract conceptualisation and active experimentation.

The four learning styles differ with respect to both benefits and the individual pedagogical techniques applied. Application of 'the reflective theorist' will change the student's knowledge of the field: he acquires the knowledge material and seeks to conform to what has been learned. The learned material is adopted like a manual for the individual's activities. By applying the learning style, 'the reflective practitioner', you obtain changes in your way of performing an action. This is about guidelines and advice yielding experience during a sequence of actions. The third learning style is 'the active practitioner' who, according to this division, will undergo a change in skills and in his attitude towards entrepreneurship: he adapts. Finally, there is the fourth and last learning style, 'the active theorist' who during the learning process explicates or changes his perception of the phenomenon. He is the one who gathers the threads towards an understanding of what he is involved in.

If we investigate how this division of learning styles fits in with entrepreneurship and entrepreneurs, Garavan & O'Cinneide (1994.1: 9-10) refer to a series of studies showing that entrepreneurs prefer one of the active learning styles. Although, they say, practice shows that the teaching and training situation that potential entrepreneurs are most frequently exposed to is 'the reflective theorist'. This traditional teaching method is focused on developing the students' conceptual terminology, and the exam will be a matter of an ability to repeat these concepts. Learning participation is solely reflective (non-activating).

It has never been the intention to design the course description and process to fit into a particular place in the model; but the model helps give an understanding of where you are, and where you would like to be heading. Learning styles are not based on an outside-in understanding, but a concept associated usually with an individual and the way they learn (cf dog teaching vs. cat's learning). If you nevertheless try to place the course described somewhere in the model, it will be obvious that the course matches the "conceptualization part" better than the "application part". Even if it has been the intention to develop "changes in skills and attitudes", the model would probably say that the course is closer to "changes in understanding".

3.4. The literature

The literature chosen for the course is an important part of the process. It looks like a substantial list, and it is. It is literature at three levels: a textbook in English, with a very pedagogical structure along the lines of Shane's process; it is not very theory-heavy. The other textbook is in Danish, written by a venture capitalist and entrepreneur, and it has some highly relevant "pracademic" reflections on what it is like to venture into the marketplace for the first time. It is a very thorough book that gives the students a clear understanding of what it takes to make your idea a success. The third level consists of articles and extracts from books at a higher theoretical level than the two textbooks. The purpose is to encourage the students to read research literature on the topics they are working with. It provides a theoretical understanding of what the textbooks are based on, which many students have stated that they would like to have when asked why they chose the course. However, not all students get round to reading it, but may benefit from the more hands-on practical texts. That is, much as the learning styles mentioned above can be interpreted as individual, so the study of literature can be considered an individual choice too. Until the change in exam form, it was accepted that the group presented their work as a joint product, which meant that a certain division of labour was possible between the literature/theory-inclined and the practice-oriented members of the group. This will be more difficult with the new institutionalised individualised exam form.

4. Current challenges/ problems facing the organization/ project experience or educational effort

Teaching at a university is a very personal activity, closely connected with the teacher's research interests, interests in general, age, etc. Teaching is also influenced by the climate and conditions at the institute offering the educational activities. The ideal is cooperation based on shared attitudes towards development, e.g. a number of teachers joining forces to carry out experimenting or discipline-transcending activities. The introductory description explaining the background for the educational activities chosen for the course "Entrepreneurship – from opportunity to action – the entrepreneurial process" describes how one teacher has gone through a cycle, from experimenting, crossing discipline barriers, promoting, implementing, up to the present stage of maturity, just before retirement. A cycle not unlike the well-known PLC curves. A development that has seen new ideas, creativity, political infighting, professional challenges, joys and disappointments. As mentioned, when the teacher retires, two courses in entrepreneurship will close down – leaving only one new course. This is the situation at an institution with about 7,000 students. There are lots of things happening in environments outside ASB, but they are not "intramural" activities. We have got IDEA, which somehow manages to operate without being directly anchored in the university sector. We have got CFE, who are eager to take over formal educational activities, offering credit-earning courses. But they are not "intramural" either. So lots of things are happening on the entrepreneurial front in Aarhus. But there is no integration with education, not unless the students themselves make an effort and find the relevant players – which, fortunately, they often do. Entrepreneurship is still immensely popular. Only, there is no room for it in the ordinary educational activities at universities and HE institutions. Entrepreneurship as an object for learning is "extramural". As we are going to see later, we find ourselves in an environment marked mainly by "dog teaching".

5. Further reading

See appendix 5, the e-compendium

6. References

Blenker, P., Dreisler P., & Kjeldsen J. (2006). Entrepreneurship Education – the New Challenge Facing the Universities - A framework for understanding and development of entrepreneurial university communities (Working Paper). Aarhus School of Business. Aarhus, Denmark

Blenker, P., Dreisler, P., Færgemann, H. M. & Kjeldsen, J. (2006) Learning and teaching entrepreneurship: Dilemmas, Reflections and Strategies. In Fayolle & Klandt (eds.) International Entrepreneurship Education: Issues and Newness, Cheltenham, UK, Edward Elgar.

Blenker, P., Dreisler, P., Færgemann, H. M. & Kjeldsen, J. (in press)
A Framework for entrepreneurship education in a university context
Int. J. of Entrepreneurship and Small Business, Vol. 5 No. 1, 2008

Garavan, T. N. & O’Cinneide, B. (1994.1): "Entrepreneurship Education and Training Programmes: A Review and Evaluation – Part 1",
Journal of European Industrial Training, vol. 18 (8): 3-12, 1994.

Kolb, D. A. (1984). "Experiential Learning". New York: Prentice-Hall, 1984.

Löbner, H. (2006). Learning Entrepreneurship from a Constructivist Perspective. Technology Analysis & Strategic Management, Vol. 18, No. 1, 19-38,

Shane, S. (2003). A general theory of entrepreneurship. The Individual-opportunity nexus. Cheltenham, UK, Edward Elgar

7. Appendices

APPENDIX 1.: Course description

APPENDIX 2.: Introductory letter 2007

APPENDIX 3 a.: Plan for: Entrepreneurship – opportunity to action – the entrepreneurial process.

APPENDIX 3 b.: Plan for: Entrepreneurship – opportunity to action – the entrepreneurial process.

APPENDIX 4.: Explanatory notes on participant activities and report requirements.

APPENDIX 5.: e-compendium. Articles and extracts from books.

APPENDIX 1. Course description

25319 Entrepreneurship – from opportunity to action - the entrepreneurial process

Language: Danish

Duration: 1 semester. 10 ECTS / 27 lessons total (variable number of lessons per week)

Relations to other courses

The course is related to most of the courses taught in business studies. The course forms a good basis for participation in the Venture Cup, which starts officially at the same time as the course and runs parallel with the third and fourth semester of the master programme. The first phase ends in January with a prize of DKK 10,000 awarded to the best business plan. More information at www.venturecup.dk.

Aim of the course

During as well as after their studies, many students will be involved in business development within existing organisations or they may wish to start their own business.

The aim of the course is to give the students the intellectual tools to approach such tasks, and to give them insight into and competences in entrepreneurship in practice through own projects and reflection on the projects. It is an integrated part of the course aim that the students contribute towards the creation of learning situations that further the competences required to fulfil the aim of both this specific course and of the study area in general – ie, the development of 'enterprising behaviour'.

Background of the course

The background of the course is the well-established fact that there is a widespread need for innovation and entrepreneurship in the European economy; and Denmark is no exception. The study area aims not only to motivate and educate students to start their own business but generally to develop a certain kind of behaviour, referred to in literature as enterprising behaviour – a concept which in a Danish context was first used in Bang & Olufsen's vision statement in 1925.

Main topics of the course

The key objective of the course is to identify and clarify various elements of the concept 'entrepreneurship' through the students' own projects based on field studies. These projects will enable the students to carry out and understand the various elements characterising 'the entrepreneurial process' or method, from 'pre-idea to startup', including:

- analysis of own competences in order to establish limitations and need for input of external resources
- carrying out sector/business analysis to spot potential for entrepreneurial activity
- investigating why, when and how business opportunities arise
- achieving an understanding of how such opportunities can be utilized
- demonstrating how the entrepreneurial process can transform a business opportunity into a business idea
- demonstrating a sense of reality when transforming business idea into action.

Teaching

At the start of the semester, there will be an introduction to the sequence of course activities and planned progression. There will also be an introduction to the main topics of the course listed above.

The students will be divided into groups on the basis of any wishes expressed in advance and professional background. Classes will take their starting point in the presentation of the students' own projects. Time will be allocated to preparation of a group project, to be supported, among other things, through feedback workshops.

Active participation is expected in all activities, presentations, group work and workshop meetings throughout the semester.

Performance measurement; qualifications and competences

The course gives the students a profound insight into the skills related to analysis and interpretation of business areas and an ability to spot and create opportunities for developing new business ideas. The course also gives the students an insight into their own strengths and weaknesses, to identify any competences the students may need but not possess themselves.

Creativity and innovation are key concepts for developing ideas, and critical and analytical methods essential for evaluation of the sustainability of ideas. These elements will also form part of the course; and finally the course will encourage and develop the students' competences within cooperation and communication.

Evaluation criteria:

A description of grade 12:

The student demonstrates extensive and profound knowledge of the subject and/or extensive and profound skills relating to the subject. As this is a course for entrepreneurship, and not in entrepreneurship, great importance will be attached to extensive knowledge of concepts and methods and, not least, extensive skills in applying such concepts and methods.

The student must be able to compare or combine concepts, methods and information in a mature and realistic way, and apply his/her knowledge/skills on known problems in a highly confident way, and as far as unknown problems are concerned, by combining knowledge acquired and well-known principles in such a way that realistic potential solutions are produced.

Description of grade 2:

The grade 2 means passed – just. The grade is given for an adequate performance which demonstrates that the student has fulfilled the minimum requirements for understanding, knowledge and skills for the report to pass.

The ability to combine concepts, methods and skills is at a very modest level. No attempt has been made to establish realism in the report (i.e., there is lack of practical considerations), and no attempt has been made to enlist the help and support of complementing competences.

Recommended literature

to be announced later.

In addition to text books, an electronic compendium of articles will be made available via the library and CampusNet.

Exam form

A group report of max 15 pages per person. Each student will be examined individually in the report and in the course curricula in general.

One overall grade will be given.

APPENDIX 2. Introductory letter 2007

Aarhus, 21 August 2007

For the students enrolled in the course
"Entrepreneurship – opportunity to action – the entrepreneurial process" Autumn 2007

Dear Student

Classes will be held according to the following plan:

Tuesdays from 12.00 to 13.40 in room M104 during weeks 36-44 (week 42 autumn holiday)
Tuesdays from 8.00 to 9.40 in room M205 during weeks 45-50

Classes may, however, be cancelled some weeks, e.g. to allow time for longer workshop activities. A detailed plan will be put on CampusNet later.

This course is designed as a course primarily in or for entrepreneurship; it is, however, also a theoretical course on entrepreneurship. You will be given an introduction to the subject area and theories on entrepreneurship; but for most of the course you will be expected to work independently. That is to say, you are expected to work with your own ideas in a way which makes you able to act more entrepreneurially in your everyday life. The role of theory in this process is to encourage you to reflect on your own work in relation to entrepreneurial processes.

It is part of the aim of this course that you work in a group on a project chosen and designed by the group itself.

The participants are expected to form groups of a maximum of 4 persons, and ideally group formation should be based on shared interests and goals. Participants who have not found a group by the start of the semester will be expected to join one in the course of the first two weeks.

To learn more about your intentions and reasons for enrolling in this course, I would like you to reflect on the following:

Are you primarily interested in entrepreneurship as a theoretical phenomenon – ie, are you interested mainly in the aspects of the course focusing on entrepreneurship? This interest can have different starting points: it can be an economic-theoretical interest in the role of the entrepreneurial function in an economy, or it can spring from a psychological-sociological interest in the particular type of person driven by spotting new opportunities.

Are you primarily interested in entrepreneurship as a personal phenomenon – and therefore mainly attracted to the aspects of the course relating to "in" or "for" entrepreneurship? Perhaps you have certain entrepreneurial ambitions but feel you lack something before you dare take the plunge? This could be something very concrete such as knowledge on how to draw up a business plan for an idea you already have – or it could be something less concrete, such as a sense of lacking a framework within which to narrow down the potential business opportunities to pursue.

And finally you may be motivated by certain specific interests, which can also take many different forms – such as an interest in the interface between entrepreneurship and finance – or between entrepreneurship and the new (experience) economy – or potential interfaces between entrepreneurship and aesthetics or other non-economic activities – or something entirely different.

I would like to learn a bit more about your reasons for taking this course before our first meeting on 4 September - specifically in relation to the above. Would you therefore be kind enough to send me $\frac{1}{2}$ to $\frac{3}{4}$ of an A4 page on your reflections? Please mail it to the mail address below no later than 1 September.

Your input will be used to prepare the introductory meeting on 4 September, but also to form groups whose participants share the same goals for their learning outcome of the process. (I would prefer as many groups as possible to be established prior to our meeting on 4 September).

The exam in this course involves writing a group project report followed by an oral exam, cf the rules for this type of exam. As you may know, the rules now call for an individual oral exam; more about that at our first meeting.

If you have any question before we meet on 4 September, do not hesitate to contact me at the mail address below.

When you send in the page with your reflections, please make sure to include the following information:

Full name:

Specialized study abbreviation (such as mar, sol etc):

Has previously followed entrepreneurship courses: no / yes - If yes: please specify:

Enrolled at (only if other than ASB):

Yours sincerely

Associate Professor
Poul Dreisler, PhD

Aarhus School of Business /
University of Aarhus
Department of Management
pd@asb.dk

Literature for the course:

Hougaard, Søren: Forretningsidéen – om iværksættelsens tidligste faser. Samfundslitteratur, seneste udgave. (The business idea – The early stages of entrepreneurship, Springer Verlag 2005)

Rae, David: Entrepreneurship – from opportunity to action. Palgrave Macmillan 2007

In addition, extracts from books and links to articles for use in the classes are available on CampusNet (under shared folders)

APPENDIX 3 a.:

Plan for:

Entrepreneurship – opportunity to action – the entrepreneurial process

| WEEK no | DATE | THEME | TEXTS | PRESENTATION group no / name | PARTICIPANT ACTIVITY |
|---------|--------|--|---|---|--|
| 36 | 4 Sep | Introduction / Formation of groups | Intro letter and the texts forwarded Articles on pedagogy and sequencing of activities: Shane: A general theory of... | Poul Dreisler | Formation of groups and scheduling of the semester's activities |
| 37 | 11 Sep | Cancelled: conference in Cambridge | Cancelled | Cancelled | Field and project work |
| 38 | 18 Sep | I.1 Individual Attributes / Networks | Hougaard: chap 1 Sarasvathy: What makes Rae chap 2 | 3 / the teamsters 6 / spesialisterne | Presentation and class discussion based on own interest and understanding |
| 39 | 25 Sep | I.2 Individual Attributes / Networks | Burt: The Network Entrepreneur... Forbes et al: Entrepreneurial team formation Rae chap 3 | 7 /The Tertius 9 / ASB_MVP | Presentation and class discussion based on own interest and understanding Handing in theme report I |
| 40 | 2 Oct | Cancelled: project meeting in Rostock | cancelled | Cancelled | Field and project work |
| 41 | 9 Oct | II.1 Entrepreneurial Opportunities / Discovery | Hougaard: chap 2 & 3 Sarasvathy et al: Three views of entrepreneurial opportunity. Rae chap 4 | 5 / M 12 / SCD | Presentation and class discussion based on own interest and understanding |
| 42 | 16 Oct | Autumn holiday | Autumn holiday | Autumn holiday | Autumn holiday |

APPENDIX NO 3 b.:

Plan for:

Entrepreneurship – opportunity to action – the entrepreneurial process

| | | | | | |
|----|--------|--------------------------------|--|--------------------------------|---|
| 44 | 30 Oct | The Halfway Presentation | Own work | All | Presentation and discussion of halfway report 4 lessons |
| 45 | 6 Nov | III.1 Opportunity Exploitation | Hougaard chap 4 – 6 Rae chap 5 | 4 /Inno-teach 2 / SMB | Presentation and class discussion based on own interest and understanding |
| 46 | 13 Nov | III.2 Opportunity Exploitation | Abell: chap 1, 2, 7 Dimov. Dimo: From opportunity insight to Opportunity Intention. | 8 / 3E 10 / SuLo | Presentation and class discussion based on own interest and understanding |
| 47 | 20 Nov | IV.1 Execution | Hougaard: chap 7-8 Rae chap 6 + 7 | 13 / no name 14 /kampusians | Presentation and class discussion based on own interest and understanding |
| 48 | 27 Nov | IV.2 Execution | Rae chap 8 + 9 Cherwitz et al: Intellectual entrepreneurship | ? ? | Presentation and class discussion based on own interest and understanding |
| 49 | 4 Dec | Presentation and evaluation | Own works | All | Presentation and evaluation |

| | | | | | |
|----|--------|---------------------------|--|------------|-------------------------|
| | | | | | 4 lessons |
| 50 | 11 Dec | Q&A and discussion | On request | On request | Q&A / consultation etc. |
| 51 | 18 Dec | Uploading of group report | Group report to be uploaded in the folder GROUPREPORT on CampusNet | ALL | |

Literature:

In addition to the literature mentioned above, notes etc will be available on CampusNet. Participants are also expected to make any electronically produced slides or PowerPoints available in the folder carrying the relevant week number

APPENDIX 4. Explanatory notes on participant activities and report requirements

The course is designed to include in principle three different fields of participant activity:

The group's work on its own project

The group's work in relation to presentation and classroom discussion

The group's work writing theme report/halfway report and exam report

Own project. The group is to draw up a project for the semester's work as soon as possible. The group can choose to let their project follow the entire entrepreneurial process as described in the plan (from idea to invoice). Or it can choose to investigate only parts of this process, e.g. the process up to and including the identification of opportunities but no further. It is also possible to choose one's own firm and use it as a case, working on any elements in need of an in-depth investigation. The group is expected to have finally formulated its project by the end of September.

Presentation. Each group will present some of the literature appearing from the plan, (if possible) of their own choice. The group is expected not merely to give a summary of this literature but to relate the literature in question to their own project. To ask – and answer – questions such as what is of particular interest in relation to our project? Can we use it for our project; does it raise any questions in relation to our project? As can be seen, the literature is supposed to help and support work on the practical/theoretical project. It goes without saying that all the students are to have read the same literature, to be able to engage in a meaningful discussion of it in class. The presenting group is expected to prepare questions for discussion, using as a starting point any aspects that they find difficult to understand, or which they find interesting per se, and in particular in relation to their own project.

Theme report. At the end of theme 1, the group is to upload one A4 page explaining in key words how their own project is progressing, relating their project to the theme just completed (please see the folder THEMEREPORT on CampusNet) no later than Friday in the week the theme ends. In the following week, there will be a brief follow-up review of the papers submitted.

Halfway report. No later than on Friday in week 43, the group is to upload a 5-page report on its project, outlining its current status and schedule for the work still to be done. This report is to be presented in week 44 (see the folder HALFWAYREPORT on CampusNet).

Group/exam report. This report constitutes the group's final exam report. Each student is to write 10-12 pages, the report amounting to a maximum of 50 pages, including any appendixes. The exam form has been changed as of 1 September 2007.

The report must include the following items:

- a) An outline of the topics the group has chosen to focus on
- b) The presentation of the project, including relevant documentation (elaboration)
- c) An account of the group's reflections on the link between their project and the theories covered in the course. This account may also be included under item b
- d) A brief account of the group work process. This may be in an independent section or it can be an integrated part of item b.

The importance (ie, the weight) attached to the individual parts should be approx: item a 15%, b and c 70%, and d 15%.

Exam form. The nature of this course obviously prohibits the traditional series of lectures cum 4-hour written exam. The exam instead involves a written group report to act as documentation for the work carried out, including proof of the group's reflections on their own work during the process. Great importance is attached to reflection in this course; the participants must reflect on the choices made during the process. In order to live up to the requirement that exams must be individualisable, the uploaded group report forms the basis of the oral exam. Each member of the group is examined individually in the report. Both the report and the individual oral exam will be included in the evaluation resulting in the exam grade.

Poul Dreisler

APPENDIX 5: e-compendium

Articles and extracts from books

Landström, Hans. (2005).

Chapter 2: The Emergence of An Academic Field.

In: *Pioneers in Entrepreneurship and Small Business Research*, 1st ed. 2005. Corr. 2nd printing, 2005, pp. 27-57.

Springer

Abell, Derek F. (1980).

Chapter 1: The problem of defining a business.

In: *Defining the business. the starting point of strategic planning*, pp. 3-10.

Prentice-Hall

Abell, Derek F. (1980).

Chapter 2: Clues from existing theory.

In: *Defining the business. the starting point of strategic planning*, pp. 11-25.

Prentice-Hall

Abell, Derek F. (1980).

Chapter 7: A theory of business definition.

In: *Defining the business. the starting point of strategic planning*, pp. 169-190.

Prentice-Hall

Spinoso, Charles, Flores, Fernando, and Dreyfus, Hubert L. (1997).

Chapter 2: Entrepreneurship: The skill of cultural innovation.

In: *Disclosing new worlds. entrepreneurship, democratic action, and the cultivation of solidarity*, pp. 34-68.

MIT Press

Burt, Ronald S. (2000).

Chapter 12: The network Entrepreneur.

In: *Swedberg, Richard: Entrepreneurship. the social science view*, pp. 281-307.

Oxford University Press

Shane, Scott. (2003).

Chapter 1: Introduction.

In: *A general theory of entrepreneurship. the individual-opportunity nexus*, pp. 1-11.

Edward Elgar

Ardichvili, Alexander; Cardozo, Richard & Ray, Sourav. (1-1-2003).

A theory of entrepreneurial opportunity identification and development.

In: *Journal of Business Venturing*, Vol. 18, Iss. 1, pp. 105-123.

<http://www.baser.dk/login?url=http://www.sciencedirect.com/science/article/B6VDH-46RDDDP-2/2/70fe5b8fb76667b696c806015d5bde9d>

Dimov, Dimo. (2007).

From Opportunity Insight to Opportunity Intention: The Importance of Person-Situation Learning Match.

In: Entrepreneurship Theory and Practice, Vol. 31, Iss. 4, pp. 561-583.

<http://www.baser.dk/login?url=http://www.blackwell-synergy.com/doi/abs/10.1111/j.1540-6520.2007.00188.x>

Forbes, Daniel P.; Borchert, Patricia S.; Zellmer-Bruhn, Mary E. & Sapienza, Harry J. (2006).

Entrepreneurial Team Formation: An Exploration of New Member Addition.

In: Entrepreneurship Theory and Practice, Vol. 30, Iss. 2, pp. 225-248.

<http://www.baser.dk/login?url=http://www.blackwell-synergy.com/doi/abs/10.1111/j.1540-6520.2006.00119.x>

Cherwitz, Richard A. & Sullivan, Charlotte A. (2002).

Intellectual entrepreneurship: a vision for graduate education.

In: Change, Iss. November/December, pp. 22-27.

<https://webpace.utexas.edu/cherwitz/www/articles/change.pdf>

The article can be found at the page with selected IE Publications Papers:

Sarasvathy, Saras D. (2001)

What makes entrepreneurs entrepreneurial?

Paper from University of Washington,
School of Business

Pp 1-9.

To be found at this homepage: <http://www.effectuation.org/>

Sarasvathy, Saras D.; Nicholas Dew; S. Ramakrishna Valamuri & Sankaran Venkataraman (2002)

Three views of entrepreneurial opportunity.

Paper from University of Washington,
School of Business

Pp 1-34

Invited book chapter in the Entrepreneurship Handbook edited by Acs et.al.

(Revised February 1, 2002)

To be found at this homepage: <http://www.effectuation.org/> →Effectuation Research→ For a complete bibliography, organized by year, click here.→2000

8. Support material - Questions and Answers

What is the overall problem(s)/issue in this case?

That it turned into just another educational activity, too similar to other courses. The absence of the more dynamic environment enjoyed before is sadly felt. Business school students need inter-disciplinarity, which is no longer present in the course; the students themselves are, however, required to establish inter-disciplinarity in their project. The individual oral exam is a huge problem.

What are the factors affecting the problem(s) related to this case?

Professional disagreement, personal and institutional rivalry etc. In spite of highly motivated and involved students, the subject area does not enjoy a high status at the universities. Universities reward research, not educational development. Lack of close contact with the environment. A question of the teacher's position on the PLC curve.

Discuss entrepreneurial didactical, pedagogical and organizational issues and resources related to this case.

Misses the previous concrete cooperation with the many and diverse research-park and innovative activities in Aarhus. Participants too tied down by time schedules. They work hard, but (after 4 years) they are still not sufficiently prepared for independent studies. All things considered, the course is progressing well. Probably too structured, though. Major emphasis is attached to the participants' own work.

What role do different players (trainers, policymakers) play in the overall planning, implementation and management of the entrepreneurship education effort and applications?

The section Background for the case has already dealt with this issue. Politicised agendas have had a lot of influence. Changing, though, after administrative reform of local government. The jungle of financial support schemes has led to sub-optimisation. Entrepreneurship is a buzz-word used (and abused) by lots of players. Everybody wants a piece of the action, with the notable exception of the universities. The pracademic spirit has not been able to change the "ivory tower" attitude.

What are the possible alternatives and pros and cons of each alternative facing the organization in dealing with entrepreneurship practice and the learning goals related to the case?

Many entrepreneurship activities take place "outside" the university system, but it is obvious that similar activities could just as easily be established "within" the system, if there was a wish to do so. To mention a few examples: Stanford, Department for Engineering and University of Seattle have established internal centres for entrepreneurship, functioning along much the same lines as those found in Denmark outside the system, and struggling to survive.

What are some of the alternative approaches that could be considered in achieving the learning goals related to the case?

Time and incentives should be given to teachers who build up learning networks as the basis for their teaching. The students should take over and take part in the network as their study and work field. This happens in various shapes at some of the newer universities, but not everywhere. The advantage is that knowledge and competences are spread to many more than the students themselves.

What recommendations can be made to the educational staff, policy makers or management of the organization described in the case? Provide your arguments in support of the recommended solution.

The universities must make up their minds whether they wish to stick to the ivory tower spirit or to realise an entrepreneurial university vision. If they chose the latter, they must develop learning programmes in which knowledge and application of knowledge are given equal weight (mutual knowledge and competence creation). Establish networks including business and "outside" actors. Make inter-disciplinarity a requirement and organise according to a contingency principle. That is, in each specific situation consider and choose the most sensible line of action.

9. Epilogue and lessons learned

This has been written as a response to the evaluation of outputs and outcomes at the completion of the BEPART project on 2-3 October 2007 in Rostock. But what I have written is also based on my experiences over 20 years in the subject field. Apart from BEPART, I have been involved in a number of projects on entrepreneurship:

- Together with two colleagues, I have written extensively on a theme we have called "Entrepreneurship Education – the New Challenge Facing the Universities. A framework for understanding and development of entrepreneurial university communities"
- I have served as a member of a working group on "How to implement entrepreneurship in the Danish educational system – from kindergarten to PhD".
- I have been involved in projects to include entrepreneurship in the Danish folk high school movement
- I am one of the founders of Centre for Entrepreneurship and served as a co-leader for almost three years
- I was involved in the foundation of IDEA (International Danish Entrepreneurship Academy)
- I have been responsible for the teaching of subjects related to all aspects of innovation and entrepreneurship from 1989 to 2007
- plus a host of other activities.

If we look at this particular subject area from a general, overall perspective, it is characterised by a number of special circumstances not found when developing courses etc in connection with other subject areas. Some of the special circumstances surrounding entrepreneurship are:

- The development of entrepreneurship constitutes a battlefield, involving politicians, institutions, teachers, administrators and many others
- Public grants for the area are often seen as short-term investment, expected to yield high returns within a very short timeframe
- The subject area has yet to find its place at universities, a place where it can develop organically and in accordance with its own logic
- Public funds are usually given to institutions outside the university sector or to special centres or initiatives attached to universities
- Concepts like entrepreneurship, creativity and innovation have acquired a status as catch-all mantras in the school system (primary and secondary)
- University teachers are not rewarded for working with the subject area or given enough scope and funds to experiment. Instead external "consultants" are typically brought in
- When discussing experiences of including the subject area in their educations, many teachers use the word "resistance" (I heard the word used repeatedly at the conference in Cambridge in summer 2007)
- - just to mention a few of these special circumstances.

The lessons to be learned from this (and indeed the lessons learned through the project BEPART) is that we have to be more specific when we use the concept entrepreneurship and define it in terms of the time, place and level at which we wish to implement it. We need to bear in mind that the concept is

used in so many different interpretations and definitions that we should avoid using it as a course name in our educations.

As part of our educational systems, the concept Entrepreneurship has become its own worst enemy. Educations within this subject area are usually turned down by the system, and therefore organised outside it.

We need to define the concept as a process for students in all subjects at our universities, meaning that "the entrepreneurial university" should become the specific goal in the sense that the university offers educations in "enterprising / entrepreneurial behaviour", teaching students to create value for society by using their knowledge and competences alone or, in most cases, in combination with other competences.

Entrepreneurship and similar subjects should not be taught to a few highly motivated classes or groups of students; it needs to be implemented as a study form in subjects like technology, sciences and humanities, and in all other subject areas.

And we should never ask children in primary and secondary school to sit still and listen to lectures on entrepreneurship, creativity and innovation. We must encourage and not spoil their inborn talent for these behavioural elements. That is why it is a big mistake that the subject field has now been taken up at teachers' training colleges, demanding these concepts to be added to the curriculum.

At universities, we have to look at entrepreneurship as processes and new pedagogical forms, trying to combine academic theory and practice in such a way that new knowledge is created where the spheres meet, and knowledge becomes the basis for the creation of value, for both the student and society.

There is a concept called an "intellectual entrepreneur". This refers to a student who, just like a scientist, is always prepared to take a risk, constantly looking for opportunities to work together with his or her surroundings, outside the classroom. This is the philosophy behind a master programme at Texas University in Austin, USA.

"The philosophy and practise of intellectual entrepreneurship serve as a catalyst, allowing students to identify opportunities to put their training and expertise to use in creative and innovative ways, whether in business or scholarship." (Cherwitz, R.A. & Sullivan, C.A. 2002). And to add a couple of other quotes:

"...to succeed in entrepreneurial capitalism, everyone must learn to be entrepreneurial in any setting" (Carl Schramm, President of the Kauffman Foundation), and

"More and more it is clear that entrepreneurship is a style and general method of operating and not just a set of business skills."
(The Colemann Foundation).

A Case of Teaching Business Planning at Tallinn School of Economics and Business Administration

Tallinn University of Technology

1. Learning Goals

The students:

- realise the importance of preparing a business plan to minimise risks involved in starting a new business;
- gain an overview of the Business Plan structure and preparation process;
- get accepted definitions of various Business Plan terms;
- get some practice for writing a Business Plan on the basis of their own business idea.

2. Executive summary

This chapter is demonstrating a case of teaching Business Planning at Tallinn University of Technology for students of technical specialities.

The aim of the course is to develop the basic knowledge and skills on entrepreneurship, particularly on business planning process starting from business idea generation, finding and evaluating business opportunities up to calculating financial reports of the business. The main principles, rules, processes and methodological approaches on the level of enterprise are to be explained. A business plan will be completed at the end of the semester on the basis of students' own business ideas.

The teacher's main tasks are:

- to provide theoretical knowledge on entrepreneurship, business planning and business administration;
- to instruct the students to find and test business ideas, and assess the business opportunities;
- to consult group work and writing business plans;

3. Background

Programmes of most of the technical specialities at Tallinn University of Technology include economic subjects such as macro- and micro economics and business administration or business planning. The subject of business administration also contains business planning as the main part. The programmes of both subjects envisage that students prepare a business plan as an independent work task. These subjects are obligatory for the mentioned target groups. Every year over 200 students take this course.

The classroom lessons are conducted in rooms equipped with a media projector and other needful facilities.

Two teachers are involved. While one teacher is responsible for raising the students' awareness and providing knowledge on theoretical side of entrepreneurship, business planning and business administration via lectures and discussions on relevant subjects, the other teacher is responsible for consulting students on business planning and writing business plans as well as their independent homework in the same issues.

4. Case description

The volume of the subject is 2.5 credit points and 48 hours of classroom lessons including 32 hours of lectures. One third of the total volume of the subject is independent work. The purpose of the large number of students and relatively small number of classroom lessons is to seek teaching methods that would provide the students with a comprehensive overview of entrepreneurship and business administration and an opportunity to acquire knowledge on what one must need to know of planning one's own business and how to write a business plan.

Theoretical lectures and principal discussions take place in large rounds (app. 70-150 students), but practical work of preparing business plans is conducted in practical classes in smaller rooms (app. 10-20 students). Development of a business idea and writing of a business plan carried out as a group work (app. 2-4 students).

The target group is primarily master's students in technical specialities, e.g. mechanics, chemistry, information technology, mathematics and natural sciences, power engineering, logistics etc. Depending on the economic subjects in the curricula of these specialities, two different level groups can be distinguished. On the basis of this, logistics students have this subject already on the bachelor level with focus on business planning, taking into consideration their previous knowledge about marketing, management, accounting etc. fields of economics. Knowledge of students of other specialities about economic subjects are limited only to micro and macroeconomics. They learn in greater detail the terms of entrepreneurship and business administration and in parallel are introduced to the business planning process.

In classroom lessons all theoretical issues are explained and the use of active teaching methods and the involvement of students in the classroom work is largely limited due to the large audience. Hence, students listen to a lot of theoretical material in lectures, which is supplemented with many cases and examples and which can be discussed in a large audience. Classroom lessons also discuss methodical methods that can be used in practical independent work outside the classroom (e.g. market research, collection of information on competitors, raw material and financial sources, etc.). In practical lessons discussions are held

in smaller groups in different business planning subjects and teachers consult development of business ideas found by the students and writing of business plans.

Additionally, the subject is provided with the e-learning environment (Moodle) where the students find the lecture materials, as well as instructions for practical work and tasks. The teachers and students can communicate, ask questions and have a discussion in the forum.

Contents of the subject Enterprise Economics. Business Planning

The content of the course:

I Lectures

1. week. Introduction to the course. Business idea generation. Overview of the process and structure of business planning.
2. week. Recognition and evaluation of business opportunities. Entrepreneurship, entrepreneur, enterprise. The psychological portrait of the entrepreneur.
3. week. The mission, vision and aims of enterprise, business definition. Internal and external environment of enterprise.
4. week. Main principles of marketing. Market research.
5. week. Product and price policy. Planning marketing policy.
6. week. Strategic analysis and development. Sales strategy and methods.
7. week. Business organisation and its legal forms. Non-profit organisations.
8. week. Establishment of a new enterprise, independent study on the basis of website www.aktiva.ee.
- 9.-10. week. Accounting and recording. The structure of expenditures and accounting methods. Calculating net costs. Profit statement. Cash flow prognosis. Balance.
11. week. Cost-benefit analysis
- 12.-13. week. Financial management and analysis. Time value of money. Investment budgeting.
14. week. Entrepreneurship policy and business support system.
15. week. Entrepreneurship policy in Europe and measures for promoting SMEs.
16. week. Entrepreneur as a guest lecturer. Experience and suggestion on business start-up and business development issues.

Practical lessons, workshops

All theoretical knowledge on business planning and enterprise's economic activity, as well as methods for preparing a business plan and calculations are presented in lectures. In practical lessons results of independent work are discussed and consultations conducted.

1. Consultation via e-mail or forums in issues of independent work: searching for and choice of a business idea, market research, analysis of factors that influence demand, collecting information on competitors in the first practical classroom lesson. Independent work according to instructions and lecture materials in the e-study environment: conceiving and testing a business idea; evaluation of factors that influence demand; comparative table of competitors.
2. Discussion of the results of independent work in the development and implementation of a business idea: presentation of a business idea in groups, factors that influence demand, overview and comparative analysis of competitors; questions and answers.
3. Classroom consultation in general part of business plan related issues/problems;
4. Defence of the general part of business plan with product/service pricing
5. Consultation via e-mail in business plan related issues/problems.
6. Classroom consultation in business plan related issues/problems.

7. Seminar: analysis of cases/problems encountered in enterprises and finding solutions to them
8. Defending of business plans.

Examination of knowledge: The course will end with a written examination. A precondition of admitting to examination is a timely submitted and positively defended business plan. The examination result is to the extent of 50% determined by the written examination and to the extent of 50% participation in classroom work and business plan mark. During a session all those who satisfy the preconditions are admitted to examination.

Current challenges/problems facing the organisation/project experience or educational effort

The biggest problem is that at a time the subject must be taken by a large number of students as an obligatory subject, which sets limits to using different active forms of teaching. Still, a quite suitable form for teaching large groups has been found in this case: the theoretical part in the form of lectures in a large group and practical lessons in smaller groups are synchronously combined and take place under the guidance of two teachers in parallel. The support of e-study helps a lot; it is a supplementary source of information for the students and a means of communication between themselves and with teachers. Learning of the subject is also facilitated by the website provided by the entrepreneurship support system, which contains examples and cases of lessons of from the life of enterprises in the business environment, and recommendations to other entrepreneurs.

5. Further reading

Hougaard, S. (2005). *The Business Idea. The Early Stages of Entrepreneurship*. Springer
 Immink, R., O'Kane, B., Owens, T. (2002). *Starting Your Own Business. A Workbook*. Oak Tree Press.
 Shane, S. 2003. *A General Theory of Entrepreneurship. The Individual-Opportunity Nexus*. Series: New Horizons in Entrepreneurship, University of Virginia, Edward Elgar.
 Timmons, J.A. 1999. *New Venture Creation. Entrepreneurship for the 21st Century*. Irwin McGraw-Hill, USA;
 Kallam, H., Kolbre, E., Lend, E., Möller, L., Reinhold, V., Simson, A., Uustalu, A., Venesaar, U. (2003) *Ärikorralduse põhiteadmised*.
 Külim, Tallinn;
 Ettevõtja infovõrk – www.aktiva.ee
 Ettevõtja käsiraamat (Äripäeva käsiraamat).

6. Support material

Since cases accepted for publication are considered to be teaching and educational cases, we expect many academicians to utilize these studies in their information system courses. In consideration of this, we ask that in addition to your completed case study, you also provide three teaching aids:

1. A list of questions and answers for your case
2. An epilogue and a list of lessons learned; and
3. A list of resources for further study.

Ad (1). Questions and Answers

Please prepare a list of 5-7 questions relevant to the issues, problems and challenges discussed in your case. Then provide a concise paragraph of 30-50 words in answer to each question. Feel free to create your own questions or use and adapt the sample questions listed below.

- What is the overall problem(s) issue in this case?
- What are the factors affecting the problem(s) related to this case?
- Discuss entrepreneurial, didactical, pedagogical and organizational issues and resources related to this case.
- What role do different players (trainers, policymakers) play in the overall planning, implementation and management of the entrepreneurship education effort and applications?
- What are the possible alternatives and pros and cons of each alternative facing the organization in dealing with entrepreneurship practice and the learning goals related to the case?
- What are some of alternative approaches that could be considered in achieving the learning goals related to the case?
- What recommendations can be made to the educational staff, policy makers or management of the organization described in the case? Provide your arguments in support of the recommended solution.

Ad (2). Epilogue and Lessons Learned

Please provide an epilogue paragraph in which you discuss the long-range effects of your case. Do not include an epilogue in your actual case study. Next, provide a list of 3-5 lessons, along with a concise explanation of each, that in your opinion can be learned from your study.

Ad (3). List of Additional Sources

Please prepare a list of other resources (e.g., journal articles, books, Web sites) that might be relevant for obtaining additional information either directly related to or similar to your case. List any industries where the described case may be pertinent.

Master Program in Entrepreneurship and Technology Management: Evaluation of the Successful Initiative in Estonia

Janita Andrijevskaja

University of Tartu
Faculty of Economics and Business Administration

1. Introduction

Wide range of universities and colleges has been recently investing in developing programs in entrepreneurship and technology management. Striving for entrepreneurial knowledge economies and supported by strong political support, many institutions have successfully introduced either technology management or entrepreneurship curricular. However, there are rather few examples of successful integration of both subjects.

University of Tartu (Estonia) has been the first university in the Baltic States to integrate entrepreneurship and technology management in a master program curricular. The program's objective is to provide modern and applicable knowledge in entrepreneurship, innovation and technology management. Oriented on that, the master program's long-term mission is to support Estonian companies in their becoming more innovative and technology oriented.

Started in 2002, the program has yet a short operating experience and might have some challenges to overcome, nevertheless it is clear - this initiative does have a strong demand in Estonia. The objective of the present article is not only to describe the program, but also evaluate the extent to which the Master Program succeeds in providing modern and applicable knowledge in entrepreneurship, innovation and technology for the managers of small high-tech companies. The reason for focusing on small high-tech companies is that managers of these companies are considered one of the main target groups for the program.

The content of this article can be useful for the institutions that are planning to launch interdisciplinary programs on entrepreneurship and technology management (ETM) as well as for institutions that look for good ideas to improve their program.

2. Methodology of the evaluation

To achieve the surveys' objective, and evaluate ETM master program's contribution to strengthening small high-tech companies, the author follows the stages, presented in figure 1. Firstly, educational "supply side" is presented: the author describes ETM master program at the University of Tartu and briefly refers to the experiences with entrepreneurship programs in other countries. Then "the demand side" is analyzed: the needs of potential students (i.e. small high-tech companies) are under discussion.

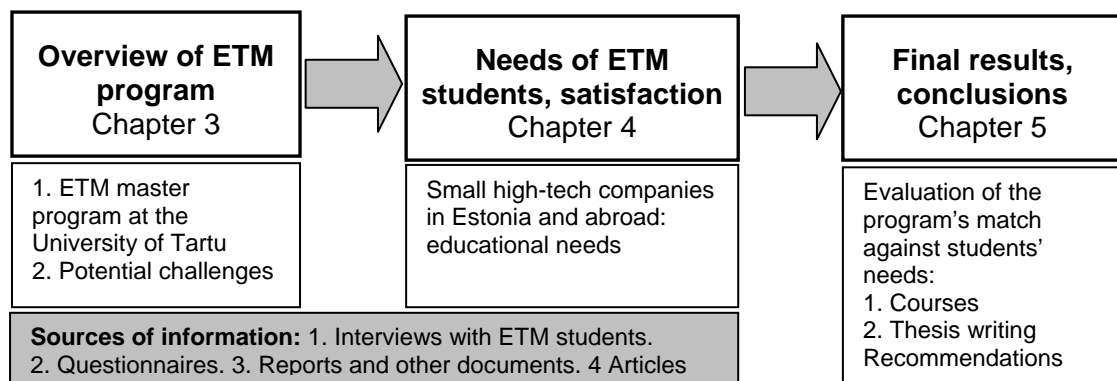


Figure 1. Structure of the study

Conducting empirical survey, several primary and secondary information sources were used: interviews with student and programs coordinators, questionnaires and documents on ETM. Two types of questionnaires were analyzed in this study: survey of students' general satisfaction, and alumni questionnaire. The questionnaire of satisfaction encompasses opinions of majority of students, whereas alumni-oriented questioning was conducted with only 3 students. These students (managers of high-tech companies) are among the first to graduate from the discussed program. The results and conclusions of the study are presented in the final part of the report.

3. ETM master program: overview and potential challenges

The master program in Entrepreneurship and Technology Management at the University of Tartu was first opened for enrollment in 2002. The initial objective of the program coincides with its present objective - it was to integrate studies in entrepreneurship and technology management and raise "...entrepreneurial culture in the academic community" (Final...2001). Launching ETM curricular was a pioneering initiative in Baltic States: up to present, there is no other institutions neither in Estonia nor in other Baltic States that run similar program.

The program was developed by international team of four people: prof. Tamkivi and prof. Karelson from Estonia (Tallinn University of Technology), prof. Formica and Lex de Lange from the Netherlands (Zernike Group). All of them belonged to the International Association of Science Parks – the organization through which mentioned above people got acquainted. The advantage of the initiative group was a good knowledge of technology management (Tallinn University of Technology) and extensive entrepreneurial experience (Zernike Group). Both knowledge and experience was helpful in applying for PHARE funds to develop the curricular in details.

The general data on the ETM master program presented in table 1 was planned back in 2001 and is also valid nowadays. After introduction of the curricular, a 4-member council for ETM program development was formed, consisting of two professors and two students' representatives. The council was to initiate changes in the program. The structure of courses (presented in Appendix) has changed insignificantly over the last 3 years, that can be a sign of a good planning: prior the introduction of ETM program, numerous interviews were conducted with potential ETM students to identify educational needs of the target group.

Table 1. General data on the EMT master program at the University of Tartu

| Criteria | Description |
|-----------------------------|---|
| Nominal study time | 2 years |
| Volume of the program | 80 credit points (CP) or 120 CP according to ECTS |
| Entrance criteria | Bachelor degree in natural sciences, engineering, economics or social sciences |
| Structure of the program | 56 CP for ETM obligatory and non-obligatory courses 20 CP – Master Thesis 4 CP – courses under other faculties |
| Groups of ETM courses | 1. Entrepreneurial environment 2. Technology policy and management 3. Legal issues 4. Human resource and communication 5. Marketing and sales management 6. Financial planning and control |
| Study time schedules | Classes once a month, over long weekends: Thursday through Sunday |
| Number of enrolled students | 2002 – 25 students; 2003 – 30 students, 2004 – 35 students |

As planned, the ETM master program gained international and interdisciplinary character from the very first days of its establishments. Not only teachers from Estonian universities taught ETM, but also experts from Zernike Group (The Netherlands), International University of Entrepreneurship (The Netherlands), and Michigan Technological University (USA).

The target group of the Master program is specialists who have received Bachelor degree in the fields of natural sciences, engineering, economics or social sciences. When selecting applicants the priority is given to students with educational background from natural sciences and engineering; another priority's criteria is managerial experience and strong motivation for entrepreneurial activities of a student.

Being launched in 2002, the master program's nominal study time was 2 years, thus in the year 2004 the first four students have graduated from the faculty. By July 2005, six more students are expected to obtain ETM Master Diploma. Also in the 2005 the program will go through the accreditation process at the Estonian Ministry of Education.

In the following part of the chapter the problems of entrepreneurial education are briefly discussed based on the experience reported from countries with advanced economies. It might be expected that Estonia, having only 15 years of democratic, market-driven economy can face the same problems while developing programs for entrepreneurial education.

According to the European Commission's report (Final...2001) the major problems related to entrepreneurial education are the following:

1. Entrepreneurship programs are not supported on political level, and are weakly integrated into educational system.
2. The evaluation system of entrepreneurship education is inadequate.
3. At universities, entrepreneurship is mostly taught to business students.
4. Teachers are not sufficiently trained to become entrepreneur.
5. Weak relations among universities and business sector diminish effectiveness of teaching entrepreneurship.

The presented long list of problems indicates, that not only it might be difficult to launch the problem (lack of experience, lack of political and financial support), but it also challenging to insure good quality of courses, their correspondence to the needs of entrepreneurs.

Indeed, even the United Kingdom, country known for pro-business environment, high-quality MBA and entrepreneurship programs, is criticized for inefficient entrepreneurship teaching methods. Numerous UK entrepreneurship programs lack structure and clear objectives, institutions prefer investing in advertising innovative programs rather than raising quality of curricular. In many institutions the established academic traditions are a serious obstacle for entrepreneurial programs to be launched, thus new initiatives face tremendous resistance. (Tiratsoo 2004)

Problems of entrepreneurship and technology management education are discussed by Weller (1999), who mentions that lecturers often choose specialist approach, not integrating particular course with other courses, or not integrating theory with business or other type of environment.

Launched in 2002 in Tartu, the ETM master program enjoys growth of enrolled number of students and favorable public image. Nevertheless, considering the experience of other countries it might be expected that there are serious challenges facing this pioneering curricular.

Educational needs of small high-tech companies

After a long period of planned economy, Estonia gained independence in 1991, having faced the need for restructuring of partly collapsed industries and raising competitiveness of newly established businesses. Even though the government is trying to improve business environment in Estonia, there are yet numerous problems that hold ratio of start-ups and innovative companies at the level below EU average.

What educational needs do small high-tech companies have? Due to the fact, that this question is not sufficiently studied in Estonia, the experience of other countries is presented here. For example, survey of Chiesa and Piccaluga (2000) showed that among the most critical issues for small high-tech companies were finding financing sources, applying right marketing approach and commercializing the technology (see table 2).

Table 2. Major problems of small high-tech companies

| Problem | Average rating (1-unimportant, 5 – critical importance) |
|---|--|
| Financing | 3,58 |
| Marketing, selling, commercialization | 3,10 |
| Evaluation of market's needs | 2,73 |
| Distribution, logistics | 2,57 |
| Technical problems in production and development of product | 2,42 |
| Problems with contracts | 1,83 |
| Managing human resource | 1,78 |
| Problems with business owner | 1,62 |
| IPR | 1,54 |

Source: Chiesa, Piccaluga 2000

For many Estonian technology-based companies, local market is too small to operate without losses, thus it would be necessary for ETM educational programs to include courses on internationalization. Another important aspect discussed in literature on high-tech small businesses is a question of employees' motivation (Nurmi 1998). The biggest value in innovative companies is often not just technologies, but people, who develop and commercialize technologies. Retaining and motivating these people can be challenging for manager, who has no managerial education. Summarizing the discussion above, manager of a small high-tech company is likely to have interest in the following educational fields: marketing, sales, internationalization, human resource management. Additionally it is also important to learn how to manage technology efficiently. These four fields with several keywords have been presented to several ETM students. The results of discussion - major educational needs perceived by several ETM students - are presented in the table 3.

Table 3. Educational needs of small high-tech companies' managers

| Field | Educational needs |
|-----------------------|---|
| Marketing and sales | Practical marketing skills for small high-tech company |
| | Mapping potential market |
| | Cooperation with client, communicational psychology |
| | Marketing in a narrow technological field |
| | Sales and organization of distribution network |
| Product development | Evaluation of commercial potential and viability of a business idea |
| | Creation of a network (finance, marketing, technology etc.) |
| | Patents, IPR |
| | Product development, technology transfer |
| Internationali-zation | Contracts and international business acts |
| | Getting started in a narrow, but global technology fiel. |
| | Searching and choosing strategic partners |
| | Advertising, purchasing decisions etc in various countries |
| Teamwork management | Motivating employees to think in business terms |
| | Teamwork |
| | Organizational culture (acknowledgements etc) |

Source: Based on interviews with ETM students

When asked about writing a Master Thesis at the university, ETM students expressed uniform opinion the subject for the Thesis need to be closely connected to practical issues, for example, case-solving approach or writing a business plan. Students did appreciate the time spent consulting with supervisor and other involved people on problems connected to the thesis. Thus not only content of curricular is important for students, but also informal communication with lecturers, professors and motivating and pragmatic requirements for writing a Master Thesis.

Results and conclusions

The objective of the present article was to present ETM master program introduced at the University of Tartu and to analyze, to which extent the program corresponds to the needs of managers of small high-tech companies. The description of the ETM was given in chapter 1, whereas the program's match against students needs is to be discussed in the present section. It is also presented here, what are the major strengths and weaknesses of the program and what are the opportunities for further development.

ETM master program consists of 26 courses, grouped in 6 modules (see Appendix 1). After the needs of several managers of small high-tech companies have been identified in the previous chapter, it is now possible to clarify, to which extent the required education is reflected in the ETM master curricular (see table 4).

Table 4. Match between educational needs of students and available ETM courses

| Field | Educational needs | Available ETM courses |
|----------------------|---|--|
| Marketing and sales | Practical marketing skills for small high-tech company | Marketing |
| | Mapping potential market | Marketing |
| | Cooperation with client, communicational psychology | Sales and distribution management |
| | Marketing in a narrow technological field | - |
| | Sales and organization of distribution network | Sales and distribution management |
| Product development | Evaluation of commercial potential and viability of a business idea | Application of technology strategy methods in business |
| | Creation of a network (finance, marketing, technology etc.) | - |
| | Patents, IPR | Intellectual property rights: licensing, protection of trademarks and products |
| | Product development, technology transfer | Technology transfer; Quality management; Nanotechnologies etc |
| Internationalization | Contracts and international business acts | Contract and business negotiations |
| | Getting started in a narrow, but global technology field. | - |
| | Searching and choosing strategic partners | - |
| | Advertising, purchasing decisions etc in various countries | Sales and distribution management; Marketing |
| Team-work | Motivating employees to think in business terms | Leadership and personnel development |
| | Teamwork | - |
| | Organizational culture (acknowledgements etc) | Organizational culture |

Source: Based on table 3 and ETM master curricular

Analyzing the match between students' educational needs and available ETM courses, it appears that most of the required fields are covered by the Master Program. The interviews with students enabled collecting some additional information. Students with non-economic background appreciated the fact that they could enroll into the program that combines business, entrepreneurship and technological matters. It is also highly valued that most of the ETM teachers are professionals in their fields and some of them have also extensive practical experience.

Dissatisfaction caused the fact that several technology-oriented subjects are poorly connected to business and entrepreneurship, being more like scientific courses instead. There was also comment that some of the teachers (mostly local) are reluctant to make courses interactive, and courses' information to be more applicable in business. This might be caused by: a) teachers lack of appropriate training in modern teaching methods, b) traditionally academic career of several local teachers.

Table 5. Conclusions of the study

| Strengths | Weaknesses |
|--|--|
| Interdisciplinary: technology, business, entrepreneurship | Local teachers lack ability/motivation to connect theory with business reality |
| International network of top-specialists | Local teachers use few methods to make the course interactive |
| Uniqueness in Baltic States | Traditionally academic requirements to Master Thesis |
| Sustainable structure of courses | Lack of several essential courses |
| Suggestions | |
| Organize training seminars for current and potential ETM teachers | |
| Add several courses: on psychology, launching new product etc. | |
| Invite practitioners (including ETM alumni) for short-term lecturing | |
| Rethink requirements for the ETM Master Thesis | |
| Strengthen international network and links to practitioners with academic background | |

Source: compiled by the author

The ETM master program has been developed based on the need of Estonian businesses, and demand for ETM education is clearly increasing. Even though there are quite a few challenges ETM program faces, the council of ETM program development works on improving the program by attracting new partners and raising requirements for ETM teachers. After the accreditation of the program the discussions will start to prepare English version of the program for international students.

References

1. Chiesa, V., Piccaluga, A. Exploitation and diffusion of public research: the case of academic spin-off companies in Italy. – R&D Management, 2000, Vol 30, No. 4, pp. 329-339.
2. Ettevõtlus ja tehnoloogia juhtimine: õppekava. Tartu Ülikool. Majandusteaduskond. 2004
3. Final Report of the Expert Group “Best Procedure” project on Education and Training for Entrepreneurship. November 2002. 58 p. [europa.eu.int/comm/enterprise/entrepreneurship/support_measures/training_education/education_final.pdf]
4. Final Report on Development of Mater Programme in Entrepreneurship and Technology Management. 2001
5. Interviewed persons: Dorel Tamm, Tõnis Mets, 3 ETM students.
6. Tiratsoo, N. The “Americanization” of Management Education in Britain. – Journal of Management Inquiry, Vol. 13, No 2, June 2004, pp.118-126.
7. Weller, M., Dillon, P. Education and Business Partnerships in the United Kingdom: Initiatives in Search of a Rationale.-Bulletin of Science, Technology and Society, Vol. 19, No1, February 1999, pp. 60-67.

Master Programme in Entrepreneurship and Technology Management

| | Credit Points (CP) | Primary Lecturers/ Tutors * |
|---|--------------------------|---|
| TOTAL | 80 CP | |
| 1. Module. Entrepreneurial environment | 10 CP | |
| 1.1. Entrepreneurship and Innovation, Intrapreneurship | 4 CP | Prof. P. Formica (IUE) |
| 1.2. Business Strategies. Business Planning, Product and Service Planning and Development | 4 CP | M.Sc. E. Vazquez Muñoz (IUE) |
| 1.3. Entrepreneurship | 2 CP | T. Mets (UT) |
| 1.4. Research methodology | 2 CP | E.Reiljan, U.Varblane (UT) |
| 2. Module: Technology policy and management | 20 CP | |
| 2.1. Modern Key Tehcnologies | 2 CP | M. Karelson (UT) |
| 2.2. Technology and Innovation Polices | 2 CP | K.Männik, K.Kubo (UT, Ministry of Economic Affairs) |
| 2.3. Total Quality Management | 2 CP | T.Tammaru (TTU) |
| 2.4. Technology Transfer, Technological Expertise | 2 CP | M. Karelson, (UT) |
| 2.5. Application of Technology Strategy Methods in Business | 2 CP | E. Valmra (EAS), T. Hein (HeiVäl) |
| 2.6. Technologies in the fields of specialisation (electives) | Students to select 10 CP | |
| Modern materials and materials technologies | 2 CP | J.Kikas (UT) |
| Nanotechnologies | 2 CP | R. Jaaniso (UT) |
| E-commerce | 2 CP | K. Kerem (TTU), A. Päril |
| Software development | 2 CP | |
| Information technology policies | 2 CP | J. Villemson (UT), U. Puus (Cybernetica) |
| Business Information System | 2 CP | V. Leping (UT) T. Saarsen (UT) |
| Logistics Management | 2 CP | R. Jüriado (UT) |
| Transgenic Technology | 2 CP | A. Mäe (UT) |
| Environmental Technology | 2 CP | Ü. Mander (UT) T. Tenno (UT) J. Truu (UT) |
| Management of Knowledge and Innovation Processes | 2 CP | T. Mets (UT) |

| | | |
|---|--------------|---|
| 3. Module: Marketing and sales management | 9 CP | |
| 3.1. Marketing (including brand marketing) | 3 CP | M.Miljan (UT) A. Brokaw (MTU) |
| 3.2. Sales and distribution management | 3 CP | D. Dijk (IUE) |
| 3.3. Internationalisation of business | 3 CP | P. Formica (IUE) U.Varblane (UT) T.Roolaht (UT) |
| 4. Module: Financial planning and control | 6 CP | |
| 4.1. Entrepreneurial Finance | 4 CP | A.Juhkam (UT) P.Sander (UT) T.Haldma (UT) |
| 4.2. Fundraising Process: Grants / Subsidies to Private Funding, seed Capital for Start-ups | 2 CP | L. De Lange (IUE), A. Juhkam (UT) |
| 5. Module: Legal Issues | 4 CP | |
| 5.1. Intellectual property rights framework, including the licensing, protection of trademarks and products | 2 CP | L.A. Stienstra (IUE) |
| 5.2. Project Management | 2 CP | T.Mets, K. Kaarna (UT) |
| 6. Module: Human resources and communication | 7 CP | |
| 6.1. Leadership and personnel development | 2 CP | K.Türk (UT) |
| 6.2. Organisation and Organisational Culture | 3 CP | M.Vadi (UT) |
| Free courses | 4 CP | |
| Master Thesis | 20 CP | |

* used abbreviations: IUE – International University of Entrepreneurship, Netherlands, UT – University of Tartu, TTU – Tallinn Technical University, MTU – Michigan Technological University

Competence-based Entrepreneurship Model

Entrepreneurship Incubators at HAMK University of Applied Sciences

Seija Pajari-Stylman

Project Manager

P.O.Box 190, 13101 HÄMEENLINNA

tel. +358 (0)3 646 3671

fax +358 (0)3 646 3700

seija.pajari-stylman@hamk.fi

Heikki Hannula

Senior Lecturer

P.O.Box 182, 13101 HÄMEENLINNA

tel. +358 (0)3 646 3377

fax +358 (0)3 646 3200

heikki.hannula@hamk.fi

Keywords:

Learning, entrepreneurship, competence, incubator

Abstract

Pre- and start-up incubators are used as authentic and simulative learning environments at HAMK University of Applied Sciences. They can offer the students excellent opportunities to learn entrepreneurial competences in simulative or even authentic situations. These provide the students with good learning experiences. For high-quality learning these experiences are necessary but not enough. The experiences will be reflected on in the action learning sessions.

In this article we first describe the basic assumptions about our thinking of the learning of entrepreneurial competences. Then we give an example of our learning methods. After that we will describe learning in pre- and start-up incubators at HAMK University of Applied Sciences as an example.

1. Introduction

HAMK University of Applied Sciences offers high-quality education, research and development services, and an international atmosphere. Situated centrally in the prime area of southern Finland, HAMK has units in seven locations with 25 degree programmes and 7000 students. Our main aim is to develop extensive competence that can be utilised by businesses, industry and the public sector in the region as well as globally. HAMK's centres of expertise, developed in cooperation with companies and municipalities, support our degree programmes as well as research and further education. Our fields of education are Culture, Natural Resources and the Environment, Natural Sciences, Social Sciences, Business and Administration, Social Services, Health and Sports, Technology, Communication and Transport, Tourism, Catering and Domestic Services as well as Vocational Teacher Education. All degree programmes at HAMK are delivered in Finnish with the exception of the Construction Engineering programme in Hämeenlinna, the International Business programme in Valkeakoski, and the Mechanical Engineering and Production Technology programme in Riihimäki, which all are delivered in English. (HAMK University of Applied Sciences)

HAMK University of Applied Sciences launched pre-incubator activities in seven of its units as from 1st January 2004. Pre-incubators a.k.a. start-up incubators are located in the Visamäki unit in Hämeenlinna and in the Forssa, Lepaa, Mustiala, Riihimäki, Valkeakoski and Evo units.

The objective of pre-incubator activities is to learn about entrepreneurship and to learn by actually being involved in business. The activities are divided in three stages:

- learning to understand entrepreneurship,
- learning by actually being involved in business,
- learning to do business. (Saurio 2003, 117).

2. Background

2.1. Learning entrepreneurial competences

Before we can describe our incubator model, we should define how we understand some key concepts. It is very important to understand how we believe the people can learn. The first important concept is learning. We have to think about entrepreneurship, as well. How do we understand the dimensions of entrepreneurship? Further, we have to understand the concept of competence.

Thus, there are three basic concepts to define. Before the conclusions we would like to specify how we understand each of them.

2.2. Learning

Learning not teaching is the basic process in entrepreneurial studies at HAMK University of Applied Sciences. We apply a constructivist view on learning. The main task of a teacher is to support the learning of his/her students or other learners. Instead of distributors of information, knowledge or skills, the teachers are more tutors, mentors or counselors who try to ensure that the students get good and motivating learning experiences and that they reflect on these in interactions and in collaboration with their tutors and peers. In vocational and professional learning the learning experiences should be as authentic as possible. That is why we believe in the constructive ways of learning modelled by for example in Learning by Doing, Project Learning, Action Learning, Problem-Based Learning, Entrepreneurial Learning etc. Even if we believe in applying several learning models, in this article we use action learning as an example.

There are not only one or two ways of learning. Every learner is a unique person and he/she learns in a personal way. And that is why we think that learning and teaching should be as personalized as possible. The basis of a learning process is the mental constructions of a learner. We try to help and support our learners to find out the best ways of changing and developing their mental construction to enable vocational and professional growth.

How to support the learning process? The effective methods of supporting learning should be very many-sided. That means that we should find out several, not only one didactical and pedagogical way to support the learning process effectively. There are several ways of learning both formally, informally and non-formally. Reading, doing, observing, group working etc. are examples how to experience learning. Also the awareness of the meanings and targets is important. The learners should know why to work and what to do to reach the set objectives. For example at the end of the studies or after the studies, the incubation of the ideas is a very efficient learning method. However, but before that many other methods should have been used.

2.3. Entrepreneurship

Entrepreneurship is a wide concept. It means not only entrepreneurship as an entrepreneur. It means individual entrepreneurship, organizational entrepreneurship and intrapreneurship, as well. Paula Kyrö and Camille Carrier (2005, 22) define these four issues in the following way:

1. The oldest form of individual, self-oriented entrepreneurship, meaning an individual's self-oriented behavior (individual entrepreneurship),
2. The creation, management and ownership of a small enterprise, referring to the individual entrepreneur and his enterprise (entrepreneurship),
3. Corporate or organizational entrepreneurship referring to an organization's collective behaviour (organizational entrepreneurship), and finally
4. Intrapreneurship referring to the interplay between individual and organizational entrepreneurship.

It means that entrepreneurship appears both in finding out and rolling your own business, working for another or for example in voluntary hobbies. It can be called entrepreneurial behavior (Gibb 2005, 46-47). He means by entrepreneurial behaviours:

- opportunity seeking and grasping,
- taking initiatives to make things happen,
- solving problems creatively,
- managing autonomously,
- taking responsibility for, and ownership of, things,
- seeing things through,
- networking effectively to manage interdependence,
- putting things together creatively,
- using judgement to take calculated risks.

In the hard core of entrepreneurship there are many different ways of thinking which vary between the writers. For example according to Koiranen & Ruohotie (2001, 111) entrepreneurship is a holistic, responsible and innovative way of thinking, acting and being to the working life. It can be seen as the affective, conative, and cognitive mental properties. In the cognitive area there are for example skills and the knowledge. But we can see the values and attitudes in entrepreneurship in the affective area as well. We can see the motivational things and orientations in the conative area. (Snow, Corno & Jackson,

1994, 243-248) All these things determine the entrepreneurship as well and they should also be paid attention to.

On the other hand entrepreneurship is strongly associated with the abilities to recognize the opportunities in the environment and to exploit them (Kyrö 2005, 15; Carrier 2005, 1; Gibb 2005, 5). That means especially the ability to see and sketch different states of affairs in the future. A man should also believe in his own influence on the things that will happen. In other words we need proactivity. (Heinonen & Paasio 2005, 22)

The concept of opportunity includes the possibility that things go in a planned way. But it also includes the threat that the things will not do so in a planned way. It means that the concept of risk also concerns strongly entrepreneurship. The entrepreneurs should be able to live with the uncertainty. (Kyrö 2006, 100)

As a conclusion from the things mentioned above, we would like to present the definition that describes our thinking: Entrepreneurship is not only being or becoming an entrepreneur. It is holistic, visionary, innovative, responsible and proactive action with other people to recognize and exploit opportunities. And entrepreneurship can be learnt in an entrepreneurial way.

2.4. Competence

Competence means not only knowledge, skills and mental qualities of human being that drives him/her to work. As Helakorpi (2007) lists, we can give:

- Competence is both individual and social.
- Competence is a result of both formal, informal and non-formal learning
- Competence is not only knowing or skills but it is seen more and more as managing the doing including especially the social interaction.
- Competence includes flexibility, living with insecurity and willingness to change and to be changed.
- Competence is continuous assessment and development.
- Competence is linked to the context and the culture.

The objectives of learning should be the competences. We could define them "The student is able to find out the possibilities in his/her substance" It means for example that during their studies the students of handicraft learn to find out different possibilities to get employed. They may make real products and try to sell them to real customers. They are allowed to take managed risks and have some insecurity in their studies. And so on. A very important point is also that the assessment should be targeted to the set objectives, the competences.

As already mentioned, a good method or learning environment to learn entrepreneurial competences is to incubate the ideas of the students in an entrepreneurship incubator. At HAMK University of Applied Sciences there are several incubators and in the following we will present them as case-based teaching. Or as we rather say "Case-based learning in entrepreneurship education."

3. Description of the application of the model at HAMK University of Applied Sciences

The objective of pre-incubator activities in seven units of HAMK is to learn about entrepreneurship and to learn by actually being involved in business. The activities are divided in three stages:

- learning to understand entrepreneurship,
- learning by actually being involved in business,
- learning to do business. (Saurio 2003, 117).

The division clarifies the specification of objectives. This means that actual municipal business incubators are left with the task of further developing and supporting business start-ups, i.e. learning to do business after graduation. This is why the primary indicator for pre-incubator activities is not the number of enterprises created, but the quality of activities and the number of students and studies completed within a pre-incubator's learning environment. A pre-incubator is, first and foremost, a learning environment for studying entrepreneurship and business activities.

The objectives for pre-incubator activities specified in the degree programmes' performance agreements for 2005–2007 are listed in the table below. The same table also shows the quantitative student situation for each unit as at 30th April 2007.

TABLE 1. The students in the incubators of HAMK UAS

| Unit | Target student numbers in the degree programmes' performance agreements for 2005–2007 | Situation as at 1 st Nov. 2004 | Situation as at 31 st Oct. 2005 | Situation as at 30 th Apr. 2006 | Situation as at 31 st Oct. 2006 | Situation as at 30 th Apr. 2007 | Credits At 30 th Apr. 2007 |
|--------------|---|---|--|--|--|--|---------------------------------------|
| Visamäki | 70 | 57 | 55 | 73 | 29 | 28 | 71 |
| Forssa | 6–7 | 7 | 18 | 15 | 15 | 57 | 240 |
| Lepaa | 10–12 | 9 | 13 | 18 | 17 | 19 | 196 |
| Mustiala | 8–9 | 4 | 4 | 41 | 62 | 59 | 397 |
| Riihimäki | 29 | Not available | 7 | 11 | 10 | 22 | |
| Valkeakoski | 6 | 5 | 7 | 13 | 2 | Not available | |
| Evo | 1–2 | 3 | 0 | 0 | 20 | 12 | |
| Total | 130–143 (~135) | 85 (excl. Riihimäki) | 102 | 171 | 155 | 197 | 904 |

Pre-incubators have been developed systematically in co-operation between pre-incubator leaders and degree programme contact people and teachers involved in pre-incubator activities. In addition to student counselling and guidance, other key aspects of these activities include training for mentors participating in the activities. Five training events were organised in 2004, dealing with topics such as the status of the student, the role of the leader, student counselling at the pre-incubator, constructive assessment and finances. Training events in 2005 focused on entrepreneurship education and developed a pre-incubator strategy, networking and business co-operation. Each unit organised an open day to present and market pre-incubator activities to students, teachers, other staff members and partner enterprises.

The Action Learning method has formed a key part of pre-incubator pedagogy in HAMK University of applied sciences. By working in a small multidisciplinary 'set' (group), students receive constructive feedback for their actions, new insights and encouraging support from their peer group. The multidisciplinary nature of sets has been considered to be useful, because it allows students to receive feedback both from students specialising in other fields and from those studying the same field. At the same time, Action Learning set participants' self-knowledge and perception of other people's behaviour increase, while their ability to ask questions, listen and converse improves. Action Learning is about development of business ideas and of the students themselves. Development is accomplished in a form applied to each student's own needs, in a practical manner and by solving real-life problems.

Action Learning has made it possible to achieve successful learning experiences. Action Learning sets have produced clear and immediate benefits for development of students' own enterprises or business plans. Students have learnt to ask questions and listen to other people as well as to provide and receive constructive feedback. They have time to think and reflect on their own views between set meetings. Students also learn to network while they are still studying. Many have adopted a new, questioning approach to their work. In addition, pre-incubator students have also put together personal study plans to support and develop their own pathways towards entrepreneurship. Studies completed using the Action Learning method provide an average of 5–15 ECTS credits per year.

Pre-incubators may also perform a Thomas Personal Profile Analysis for students in the final stages of their studies, which provides them with personal feedback both orally and in writing. The Thomas analysis aims to give an objective and structured overview of a student's communication and behavioural style at work. Feedback allows students to improve their self-knowledge and self-esteem. At the same time, students have also received constructive feedback about functioning as an entrepreneur, their communication styles and their supervisory and sales skills. To date, pre-incubators have already done Thomas analyses for about twenty students.

The HAMK University of Applied Sciences Starttihautomo co-operative was established in the spring of 2004. The co-operative is a company supporting pre-incubator studies and students' entrepreneurial activities, where students can safely practise business operations while studying, without losing their student status or benefits. The co-operative allows them to combine studies and entrepreneurship in practical terms during studies. The purpose of the co-operative is to function as a marketing channel for pre-incubator students' own business ideas, their own products or the products and services of a potential business enterprise and as a platform for practical entrepreneurship training. Students have the opportunity to join the co-operative while they are studying.

The Sense business plan competition aims to kick off new business ideas, teach about business planning and create new ideas, innovations, human capital and networks and to produce additional positive energy for work, growth, learning and life in general (www.sense.hamk.fi). The idea behind the Sense competition is to provide expert lectures at the beginning of the competition followed by a brainstorming and writing process to support students and finally public presentation of entries. Sense is an open business plan competition, which has been organised ever since 2001. The first competition aimed to invent something completely new and to make way for creative thinking. Participation in various business plan competitions has supported students in their entrepreneurship studies.

Co-operation with other promoters of entrepreneurship is carried out on a daily basis. Training events have been organised in different locations in co-operation with business incubators maintained by municipal business development departments, while joint plans have been made to promote entrepreneurship based on the above-mentioned division of roles. HAMK pre-incubator activities have developed considerably during the three years of operation. A pre-incubator is a learning environment providing students with opportunities to complete entrepreneurship studies, projects and work

placement and prepare their own Bachelor's thesis relating to product development, business plans, marketing or developing their own business operations. Pre-incubators provide learning through reflection and experience. Learning is problem-based, self-directed, goal-oriented and action-based learning by doing. Pre-incubator activities aim to increase awareness of entrepreneurship and business activities. The HAMK pre-incubators and Action Learning as a pedagogical process help students choose study units aiming at setting up and running a business. Pre-incubator activities support students' learning process through counselling, guiding and training them towards the world of entrepreneurship by interactive and community-based means.

References

Carrier, (2005). Pedagogical challenges in entrepreneurship education. In Kyrö, P. & Carrier, C. (Ed.) The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context. Entrepreneurship Education Series 2/2005. University of Tampere. Faculty of Education. Research Center for Vocational and Professional Education.

Gibb, A. (2005). The future of entrepreneurship education – Determining the basis for coherent policy and practice? . In Kyrö, P. & Carrier, C. (Ed.) The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context. Entrepreneurship Education Series 2/2005. University of Tampere. Faculty of Education. Research Center for Vocational and Professional Education.

HAMK University of Applied Sciences. Retrieved May 24, 2007, from http://portal.hamk.fi/portal/page/portal/HAMK/In_English/About_HAMK

Heinonen, J. & Paasio, K. (2005). Sisäinen yrittäjyys kuntatyössä. Kunnallisan kehittämissäätiön tutkimusjulkaisut nro 48.

Helakorpi, S. Osaaminen ja sen arviointi. Retrieved May 23, 2007, from <http://openetti.aokk.fi/seppoh/osaamismittarit/index.htm>

Koiranen, M. & Ruohotie, P. (2001). Yrittäjyyskasvatus: analyysija, synteesejä ja sovelluksia. Aikuiskasvatus 2/2001

Kyrö, P. & Carrier, C. (2005). Entrepreneurial Learning in universities: Bridges across borders. In Kyrö, P. & Carrier, C. (Ed.) The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context. Entrepreneurship Education Series 2/2005. University of Tampere. Faculty of Education. Research Center for Vocational and Professional Education.

Saurio, S. (2003). Yrittäjyyden edistäminen ja yrityshautomotoiminta ammattikorkeakouluympäristössä. Satakunnan ammattikorkeakoulu, A, tutkimukset 1/ 2003. Pori: Satakunnan ammattikorkeakoulu.

Snow, R.E., Corno, L. & Jackson, D. (1994). Individual Differences in Affective and Conative Functions. In Berliner, D.C. & Calfee, R.C. (eds), Handbook of Educational Psychology. New York. Simon & Schuster Macmillan, pp. 243-310

Entrepreneurship Promotion Cooperation Model in Kajaani and Kainuu
"Promoting Entrepreneurship in Kainuu"
Entrepreneurship Path Cooperation Model

Päivi Malinen, MSc

Kajaani University of Applied Sciences

paivi.malinen@kajak.fi

+ 358 44 7101 612

Päivi Partanen, MSc

Intotalo, Entrepreneurship Training Centre

paivi@intotalo.com

+ 358 44 3229 222

Keywords:

cooperation, learning by projects, learning by doing

1. Background to the entrepreneurship Path

The development of entrepreneurial attitudes and entrepreneurial skills is high on the list of regional targets. In the future Kainuu will need more and more entrepreneurial personalities who are creative, independent and self-confident solution seekers possessing good taste, good social skills and a capacity for independent thinking. According to research, 49 % of students studying at Kajaani University of Applied Sciences are interested in entrepreneurial activities. (Eronen Auli, 2005)

The development of entrepreneurship within the local authority of Kajaani is the responsibility of the Kajaani Technology Centre Oy /Business Development Department. The Business Incubator (Entrepreneurship Training Centre) Intotalo is responsible for supporting and organising training for recently established and new businesses. Intotalo has been operating in Kajaani since the beginning of 2003. During the autumn of 2005 Intotalo also started operating in Vuokatti within the vicinity of Snowpolis.

It has been necessary to find new ways of working and to carry out widespread cooperation between different parties in order to meet the challenges posed by entrepreneurship in the region. The aim of such cooperation has been to create structures and support networks to make starting up a business easier for new entrepreneurs. The goal is to enthuse university graduates with the desire to start out in business.

Intotalo started as an ESF funded project and its operations became permanent in 2006. Thus a permanent and successful cooperation model and structure has been created in Kainuu that involves Intotalo, Kajaani University of Applied Sciences and other educational institutions and businesses.

Learning Environment-Business Incubator Intotalo

Kajaani University of Applied Sciences entrepreneurship path's main learning environment is the Intotalo Business Incubator. Intotalo is a learning environment that advances learning in skills required in project work and running a business. Learning in the Intotalo is based on constructivism i.e. learning by doing. The learning process can also be described as a combining of theoretical and practical knowledge and self-knowledge (e.g. Research Professor Päivi Tynjälä). According to research, project work and learning by doing effectively promote the development of an individual's business skills and above all, generate an entrepreneurial attitude.

The most important value of the Intotalo is community. It strives to create an atmosphere and environment where small businesses can work together instead of alone. Through such a community it is easy for businesses to network with other companies and active parties in the Kainuu region. Start-up entrepreneurs and entrepreneurship students have had positive experiences of the Intotalo at the outset of their business activities. They received valuable help from others in creating their own customerships and other practical issues related to running their own businesses.

Kajaani University of Applied Sciences and Intotalo work in close collaboration to promote entrepreneurship in Kainuu. Intotalo is Kajaani UAS' business incubator. Their common aim is to discover new, start-up entrepreneurs amongst the UAS students for the incubator and to advance the development of up and running and developing companies from the outset.

2. The aim of Cooperation

The aim is to recognise and find potential entrepreneur personalities from the different fields of Kajaani University of Applied Sciences and offer them the opportunity to develop their own business idea in practice.

The target is to ensure that cooperation between Kajaani UAS and Intotalo will lead to 5 % of all graduates from Kajaani UAS establishing their own companies within five years of graduation.

3. The Entrepreneurship path in practice

Every spring Intotalo organises an open business idea competition in which participating Kajaani UAS students can develop their business ideas with the help of Intotalo's network of mentors. This support will be focussed on the best business ideas presented to the selection panel. The main competition entrance requirement is that the idea can be implemented in Northern Finland.

Students are able to test their own ideas and skills in practice via their studies and the business incubator organised by Kajaani UAS and Kajaani Intotalo. It is intended that 10 start-up businesses will be found per year for the business incubator.

Completed actions:

- Planning of entrepreneurship studies in co-operation with Kajaani UAS entrepreneurship liaison teachers and Intotalo
- Marketing of entrepreneurship courses to Kajaani UAS students and courses delivered at the Intotalo
- Supports the development of start-up businesses in the different fields of Kajaani UAS and provides entrepreneur personalities the opportunity to develop their own idea in the incubator.
- The Intotalo Incubator offers students a workstation, a customer and co-operation network and training in running their business operations and creating their own customer base.
- Graduates of Kajaani UAS
 - o The aim is to maintain contact with Kajaani UAS graduates and to support the development of their entrepreneurial skills and knowledge.
 - o The willingness of Kajaani UAS graduates to go into business will be surveyed.
 - o The results of the surveys will be used to plan and market incubator-run training courses, a possible second-cycle UAS degree qualification and specialised studies.

The business incubator entrepreneur courses to be completed during university of applied sciences studies

| Study Modules | Contents Description |
|-----------------------------------|---|
| Innoste-Business Idea Competition | A regional business idea competition open to all UAS students for the purpose of seeking business, product and service concepts for further development. The ideas and concepts under development presented during this competition can also be entered in the national Venture Cup business concept competition. |

| | |
|---|--|
| Entrepreneurship Course 9 cr | Students will gain a realistic view of their own opportunities and will make contacts with other businesses in the region through different commissions and jobs. Students will determine common aims for their own entrepreneurial skill development in teams. This course is worth 9 credits (3 + 6). It comprises team training sessions, reading and practical business ventures. |
| Business Plan 5 cr | Students must compile their own business plan based on their business idea in collaboration with the Intotalo trainer and UAS instructor/teacher. Each student will contact a mentor for support and encouragement in the development of their own businesses. This course is worth 5 credits. |
| Practical Training in Entrepreneurship 30 cr | During the practical training period students will develop their own businesses according to their business plan. They will try out whether they can successfully operate a profitable business venture. The practical training period consists of practical customer – commissioned projects, compiling a business foundation plan and development work in cooperation with the Intotalo trainers and an experienced mentor. The practical training period is worth 30 cr. Intotalo provides the students with workstations and supportive encouragement to develop their theses. |
| Entrepreneurship Thesis 15 cr | The students must complete a thesis that includes a practical analysis of the business they have/are to create and their market areas using applied theory. The thesis is worth 15 credits. Intotalo provides a workstation as well as encouragement and support. |

Postgraduate path

| | |
|--|--|
| Incubator - training | The target group of the business incubator includes graduates planning to go into business and small businesses that have recently started operating and that have a “brilliant idea” or wish to make the most of the opportunities that are on offer in the locality. The training course comprises entrepreneurship training sessions, the practical realisation of their business ventures and mentoring. The training course lasts 1 – 6 months. |
| Entrepreneurship Sparring partners and Mentors | Intotalo’s trainers spar on those planning their own business ventures to develop their own knowledge, networks and customer contacts. UAS students can also take advantage of the Intotalo mentor network. Those who are planning their own businesses can also try out their first customer contacts through the Intotalo Cooperative. |
| Entrepreneur Community | Intotalo offers new entrepreneurs workstations, office infrastructure to support the development of their business and communal support. The business trainers provide support in compiling the business plan and marketing. The managing directors of the Intotalo companies meet once a month at their own development and strategy evening. |

4. Results of cooperation 2003 - 2006

As a result of the common entrepreneurship path, 8 new businesses have been established over the last three years by UAS graduates. The aim is to further develop such operations and discover 5 new budding businesses each year. These activities, that originally started as part of a project became a permanent fixture on 1st January 2006.

EXAMPLES OF ESTABLISHED BUSINESS VENTURES:

Momentti Oy

The company offers fresh solutions in the form of sales and marketing publications, product representation, event marketing, import and marketing surveys. www.momentti.fi



Lähellä Sydäntä Ay

The women who established this care service company already had their business plan ready during their UAS studies. The name of the company (Close to my Heart) tells you all you need to know about the quality of their services and the company's values.

Tilipalvelu Elisa Ohtonen

This effective one-woman accountancy firm carries the entrepreneur's name. Elisa gained practical work experience during her UAS studies by taking care of the UAS Learning Company's financial administration. www.tilipalveluelisa.fi



Signalia Oy

A company that focuses on PR, communication and media contents production. www.signalia.fi



3D-ilme

3D image manipulation specifically for house construction and interior design. www.3d-ilme.fi



Reboot

IT support Reboot offers IT support to small companies. www.reboot.fi



Mille Trade Oy

A company operating within the field of exports to Italy. www.milletrade.fi



Western Training

A riding coaching company. www.westerntraining.fi

Kajaani University of Applied Sciences / Intotalo

ENTREPRENEURIAL SKILLS 60 cr

This module comprises entrepreneurship training, reading and practical customer relationship creation. Studies will be carried out in teams of approx. 10 persons that will be formed from the course applicants, according to the Pelp team role test results. The main training location will be the Kajaani Intotalo and students will also have the opportunity to operate in the Vuokatti Intotalo within Snowpolis.

The student team will be given their own workstation in Intotalo for the duration of the module. They will be guided and supported by their instructors and the Intotalo trainers and experienced mentors.

Description of the module:

| | |
|---------------------------|--|
| 1. Creativity in practice | |
| Credits | 3 cr |
| Aims | Students will gain a realistic view of their own opportunities and will make contacts with other businesses in the region through practical commissions. Students will determine common aims for their own entrepreneurial skill development in teams. |
| Contents | Creativity and innovation, own creativity profile, customer interface and observation of business opportunities, features of an entrepreneur and creation of networks. |
| Required data | Application, Pelp's role test |
| Assessment requirements | Team training sessions (24 H), business commissions, essays based on reading (3 points), personal learning agreement |
| Recommended reading | Coelho: Alkemisti Koski & Tuominen: Kuinka ideat syntyvät Johansson: Medici ilmiö Nordström&Ridderstål: Karaoke kapitalismi Peltola: Jokaisella on juttunsa or three points (3 p) worth of reading from the Entrepreneur's Best Books Guide/Yrittäjän Parhaat Kirjat valintaoppaasta. |
| Instructor/s | Päivi Partanen, Olli Leppänen |
| Evaluation | Pass/Fail |
| Other | The student team will be given their own workstation in Intotalo. |

| | |
|--------------------------------|--|
| 2. Practical Business Ventures | |
| Credits | 6 cr |
| Aims | Students will create customer contacts and test their own entrepreneurial and project skills in practice together with their team. |
| Contents | Leading customerships, practical project leadership, time management, team leadership, marketing and innovation. An entrepreneurial attitude. |
| Required data | A pass in 3 cr of Creativity Studies. |
| Assessment requirements | Team training sessions (48 H), essays based on reading (3 points.), planning and implementing a customer project in practice. |
| Recommended reading | Sarasvuo & Jarla: Myynnin korkeajännitys Storbacka: Asiakkaan ehdoilla Quinn: Asiakas ykköseksi Tracy: Advanced selling strategies Roddick: Business as Unusual Altmann: Myyjästä voittajaksi Gad: 4D Brändimalli Pine&Gilmore: Experience Economy or three points (3 p) worth of reading from the Entrepreneur's Best Books Guide/Yrittäjän Parhaat Kirjat valintaoppaasta. |

| | |
|--------------|--|
| Instructor/s | Päivi Partanen |
| Evaluation | Pass/Fail |
| Other | The student team will be given their own workstation and equipment supporting their business operations in Intotalo Kajaani or Vuokatti. The teams will also receive a small amount of start-up capital to develop their projects. |

| | |
|-------------------------|---|
| 3. Business Plan | |
| Credits | 5 cr |
| Aims | Students will compile their own business plan based on their business idea. They will contact a mentor who will support them and spar them on to develop their business. |
| Contents | Compilation and development of the business plan, building a safety net or support networks, evaluation of the business plan |
| Required data | Application and own business idea |
| Assessment requirements | Entrepreneur training sessions (24 H), business plan |
| Recommended reading | Lehtonen P: Strateginen yrittäjyys Holopainen & Levonen: Yrityksen perustajan opas Lyytinen & Piha: Yritä edes! Collins: Hyvästä Paras Chan&Mauuborgee: Sinisen Meren strategia Norman: Nomannin liiketoimintateesit or reading from the Entrepreneur's Best Books Guide/Yrittäjän Parhaat Kirjat valintaoppaasta |
| Instructor/s | UAS entrepreneurship teachers, Päivi Partanen and the Intotalo trainers and business mentors |
| Evaluation | 1-5 |
| Other | The student team will be given their own workstation and equipment supporting their business operations in Intotalo Kajaani or Vuokatti. Some of the entrepreneurship training sessions will be carried out with other students in the process of developing their own business ideas. |

| | |
|------------------------------|---|
| 4. Practical Training | |
| Credits | 30 op |
| Aims | Students will be able to take advantage of business opportunities that they have noticed by establishing and organising their business operations according to their business plan. Students will test their ability to carry out a business venture in a profitable way. |
| Contents | Development of the company in the business incubator, business foundation plan, mentoring and creating customerships. Practical customer projects. |
| Required data | Approved business plan |
| Instructor/s | Practical training teacher supervisor, Päivi Partanen and the Intotalo business trainers and mentors. |
| Evaluation | Pass/Fail |
| Other | The student team will be given their own workstation and equipment supporting their business operations in Intotalo Kajaani or Vuokatti. |

| | |
|---|---|
| 5. Thesis Compiled in own Business | |
| Credits | 15 cr |
| Aims | Students will be able to analyse their own business operations and markets in a practical way while at the same time applying acquired theoretical knowledge. |
| Instructor/s | Thesis teacher supervisor, Päivi Partanen and the Intotalo business trainers and mentors. |
| | |
| Evaluation | Fail, 1 - 5 |
| Other | The student team will be given their own workstation and equipment supporting their business operations in Intotalo Kajaani or Vuokatti. The thesis process is done according to the Kajaani University of Applied Sciences thesis process. |

Business Planning 3 ECTS (Business Plan)
virtual based web –course
in Kajaani University of Applied Sciences

MA Pekka Tervonen

Lecturer in economics, business operations and entrepreneurship
Kajaani University of Applied Sciences

Keywords:

business plan, mission, vision, business idea, strategy, risk

Executive summary (abstract)

The main objective of this course is to study the planning targets of a company by means of a business plan. The pedagogical method used in this course is (LBD) – learning by doing. The course will be implemented through the Moodle and/or the WebCt virtual learning environments. In this course a student will complete a Business Plan of a real or fictitious company on a formulated sheet as a word document.

The course includes the company's mission, business idea and its different parts, analysis of competition, strategy, finance and profitability calculations, vision, SWOT analysis and a brief risk management plan. The course does not include the company's marketing plan. Virtual studies mean that it is possible to accomplish this course in the by distance learning, which is very important in sparsely populated areas such as Kainuu and Northern Finland.

The pedagogical aim of the course is to promote enterprise using the LBD (learning by doing) method or authentic learning. Students can access instructions and material via the Internet links and model business plans. The course instructor will evaluate the business plans returned by students and provide feedback. The feedback takes place by the communication tools of the learning environment. The communication between the instructor and students has not been very lively depending on the nature of the course. In many cases the representatives of the target company have supervised the students in problems to complete the business plan (authentic learning). This course is offered as a free-choice course in all fields at Kajaani University of Applied Sciences. There is no amount limit for students to access the course. The instructor resource needed is 4 hours per student.

1. Background

One of the main issues that the strategy of the Kainuu region and Kajaani UAS focuses upon is the promotion of business entrepreneurship in the region. In order to implement this strategy an entrepreneurship path (described elsewhere in the Bepart project) that includes the creation of a business plan for a company in the making, was compiled at Kajaani UAS. Not all students wish to establish a company so it was decided that a compulsory short business plan would be included in entrepreneurship studies in order to ensure that all Business and Administration students would learn the different focuses of a business plan, the mission, business idea, strategies, analysis of competitors, basic calculations, values, vision and risk assessment. The business plan has achieved this objective well. Kajaani UAS also offers a degree programme delivered in English, the Degree Programme in International Business leading to a Bachelor of Business Administration degree qualification. Within the framework provided by the Bepart project it was decided to compile a Business Planning 3 ECTS course for this degree programme. The aim of this course is to advance business studies amongst international students and for it to act as a systematic basis for the business plan that must be compiled when actually establishing a company.

2. Case description

The aim of the Business Planning course, worth 3 credits, is to promote entrepreneurship amongst the students with the aid of a business plan. The method used is (LBD) – learning by doing. The course will be implemented through the Moodle and/or the WebCt virtual studies environments. Students will save an empty Word.doc business plan in their directories and fill in the different parts of the business plan using the Web-based business plan. The business plan can be compiled for a real or fictitious company. The support business plan contains instructions and links to the entrepreneurship pages of different organisations where students will find advice and tips on how to complete their own plan. Students can also email fellow students and the course instructor to ask for advice concerning their own business plan. The completed business plan must be returned to the study environment where the instructor will read, evaluate and comment on it. During evaluation the instructor will be focusing on whether the plan is logical or not, the compatibility and cohesiveness of the different parts of the plan and how much the student has learnt about entrepreneurship. Less attention will be paid to finance and profitability calculations during evaluation. If students really intend to establish a company they are advised to compile the necessary calculations with the aid of Finnvera or the Employment and Economic Development Centre in case they require loans or business support services and financing. Students are also able to accomplish a so-called long business plan within the context of the Kajaani University of Applied Sciences entrepreneurship path. In this case it is also necessary to compile a marketing plan for the company.

This course is open to all students in all schools at Kajaani University of Applied Sciences and it can be included in their free-choice studies. It is also part of the course selection offered by the Finnish Virtual University of Applied Sciences (www.amk.fi) and where several students have already completed it. The completed business plans have been good on average and the promotion of entrepreneurship has progressed according to the goals set. There have been some problems with the required calculations, though they were not the most important issue in the course objectives.

3. Current challenges/problems facing the organization / project experience or educational effort

The challenge of the course and its learning provision concerns evaluation and feedback. How and in what way should feedback be provided? Using the Moodle and/or WebCt virtual study environments, feedback is provided in an evaluation field located underneath the student's personal user ID and password, that the student can access whenever he or she wishes to do so. At the same time they can also see their grade. Feedback should be critical yet it should encourage students to become entrepreneurs. Please see the examples of feedback provided, below:

The mission, vision and values are well defined. The parts of business idea are linked with each other. Also the competitor analysis is well done. The calculations are not exactly according to the instructions. You know the value amounts better than I, but usually the total amount of capital need is equal to the financing total. In the profit statement you estimated no net profit for the first year. This is how it is done for the first year. If you were a sole trader, your salary would be the estimated net profit. Usually you do not pay YEL (self-employed person's pension) if you pay yourself a salary in your company. Your pension fee is organized through the TEL (employed person's pension) pension system. As far as I understand, your business is as a sole trader (private entrepreneurship).

The strategy of the company is well done, too. The customer needs table is good. The conclusion of the Strategy table has been carried out according to the SWOT –analysis. The risk management table is very good.

The business plan meets the requirements of this assignment well. Grade 5

The mission, vision and values are well defined. The parts of business idea are linked with each other, but it is hard to find how your business idea differs from that of the competitors. What is the core know how of your company? (mystery shopping?) Also the competitor analysis is well done. The calculations are not exactly according to the instructions. I do not pay much attention to the figures, because this is an exercise. You know the value amounts better than I, but usually the total amount of capital need is equal to the financing total. Usually you do not pay YEL (self employed person's pension) if you pay yourself a salary in your company. Your pension fee is organized through the TEL (employed person's pension) pension system. Here, you should pay the YEL -pension fee, because you do not pay wages to yourself and your partner.

The strategy of the company is well done, too. The customer needs table is good enough. The conclusion of the Strategy table has been carried out according to the SWOT –analysis. The risk management table is satisfactory.

The business plan meets the requirements of this assignment. Grade 3

If there is a lot of information missing or a lot of corrections, students must correct and complete their business plans and then resubmit them for evaluation.

4. Further reading and list of additional sources

Suitable reading for this course includes any kind of handbook or study book covering entrepreneurship, business economics, marketing, accounting and law studies. The Internet also contains huge amounts of information. Below you will find a few links:

Click here for different websites to study the planning targets of entrepreneurship and the business plan and to learn how to do business in general:

- [OCRI](#) (Canadian Entrepreneurship Centre)
- [SBA](#) (United States Small Business Administration)
- [How to write a business plans](#) (includes sample business plans)

- [Enterprise Finland](#) (website to start business in Finland)
- [Business plan calculators](#)
- [Startup Nation](#) (10 steps to start your business)
- [Tutor2](#) (mission, vision, SWOT, values, strategies)
- [QuickMBA](#) (mission, vision, SWOT, values, strategies)
- [Risk Management](#)
- [How to write a marketing plan?](#)
- [Sample marketing plans](#)

5. Appendix

Below instructions on how to log into the Business Planning 3 ECTS course.

BBA Website

The BBA courses in Kajaani University of Applied Sciences over the Internet will be offered in Moodle. You can find our e-learning environment from: <http://montana.kajak.fi/moodlebba/> Moodle is a web-based Virtual Learning environment program that allows the classroom to extend onto the web.

You must create your own username and password to access the environment:

click LOGIN in the top right hand corner,

You'll need to take a minute to create a new account for yourself on the web site. Each of the individual courses may also have a one-time "enrolment key", which you won't need until later. Here are the steps:

1. Fill out the NEW ACCOUNT form with your details.
2. An email will be immediately sent to your email address.
3. Read your email, and click on the web link it contains.
4. Your account will be confirmed and you will be logged in.
5. Select the course you want to participate in.
6. If you are prompted for an "enrolment key" - use the one that your teacher has given you. This will "enrol" you on the course. The enrolment key is "[pisnes](#)".
7. You can now access the full course. From now on you will only need to enter your personal username and password (in the form on this page) to log in and access any course you have enrolled on.
8. On the homepage click [Free choice studies](#), then click [Business Plan 3 ECTS](#). and start writing your business plan according to the instructions, tips and links.

You can always RELOGIN- from same place (left side).

After registering check your PROFILE in the top right hand corner ("Your Name"). To edit your personal information, click on "Edit Profile".

If you have questions about your course, please contact your teacher.

If you have problems with the Environment (username or password are missing), please contact the administrator: esa.niiranen@kajak.fi

| |
|--|
| |
|--|

BUSINESS PLAN

| |
|-------------------|
| Date of the plan: |
|-------------------|

| |
|-----------|
| Author/s: |
|-----------|

| |
|---|
| Name of the Company and contact information: |
|---|

1. Basic Information of the Company

Name of the Company and type of Company

| |
|--|
| |
|--|

Mission:

| |
|--|
| |
|--|

Owners:

| |
|--|
| |
|--|

Managing Director:

| |
|--|
| |
|--|

Regional marketing area and inhabitants:

| |
|--|
| |
|--|

Typical features for the branch:

| |
|--|
| |
|--|

1.1. Information of the Entrepreneur(s)

| | |
|--|--|
| Name | |
| Education | |
| Work experience | |
| Entrepreneurial experience | |
| Hobbies and other activities supporting entrepreneurship | |
| Motives for entrepreneurship? Why do I want to become an entrepreneur? Comment on your entrepreneurship test. | |

| | |
|--|--|
| Name | |
| Education | |
| Work experience | |
| Entrepreneurial experience | |
| Hobbies and other activities supporting entrepreneurship | |
| Motives for entrepreneurship? Why do I want to become an entrepreneur? Comment on your entrepreneurship test. | |

2. Environment of the Company

2.1. Competitors

Our core competitors are:

Name of the competitor (Reasons why?)

| |
|--|
| |
| |
| |

Our marginal competitors are:

Name of the competitor (Reasons why?)

| |
|--|
| |
| |
| |

Our potential competitors are:

Name of the competitor (Reasons why?)

| |
|--|
| |
| |
| |

What is the competitive situation? How do the companies in your branch compete? What is the vision of the market?

| |
|--|
| |
|--|

2.2. The Projected Situation of the Company

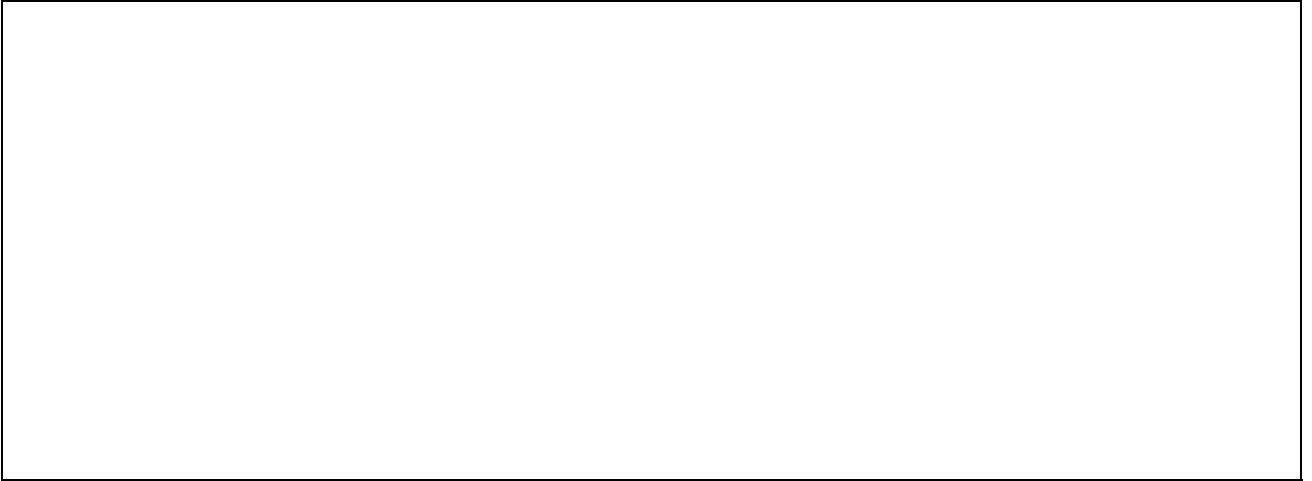
2.2.1 Business Idea

business idea

| | | | |
|--|----------|------------------|--|
| Customer's needs | | Image | |
| Customers/target groups | | Product/Services | |
| Operational mode that the Company employs (How does the Company work?) | | | |
| Resources | | | |
| Physical | Economic | Human | |
| | | | |

2.2.2 Operational Mode (How to do Business?)

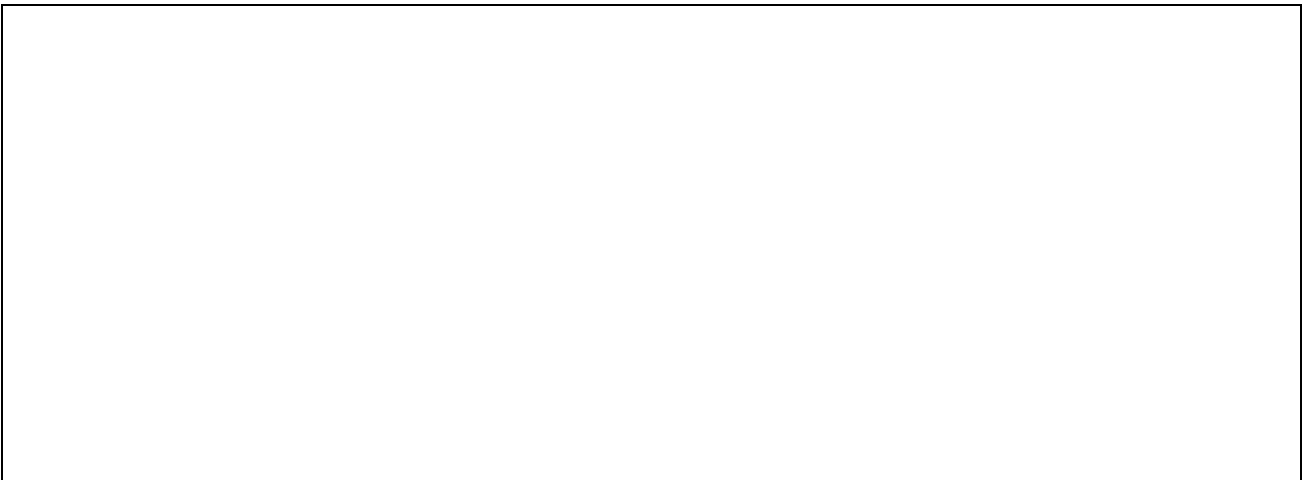
How do you get customers? Marketing communication tools?



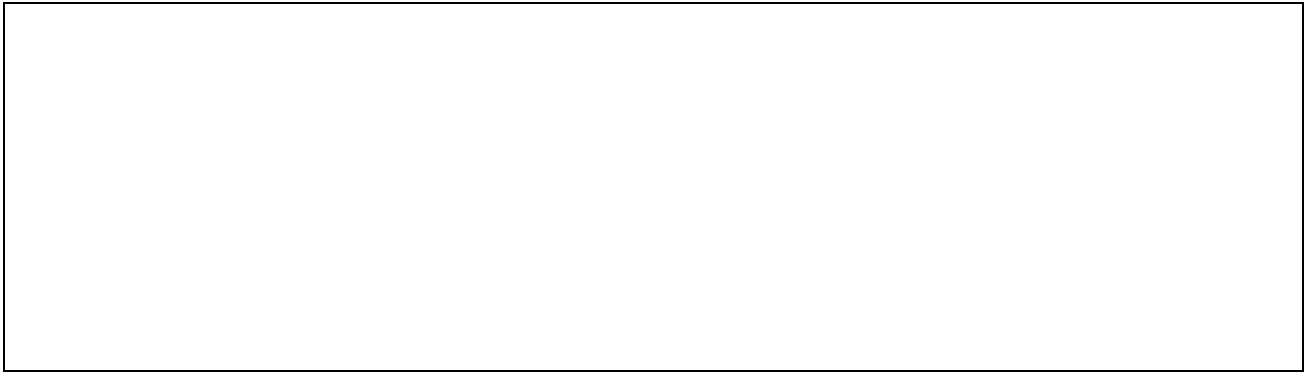
Product development. Product range



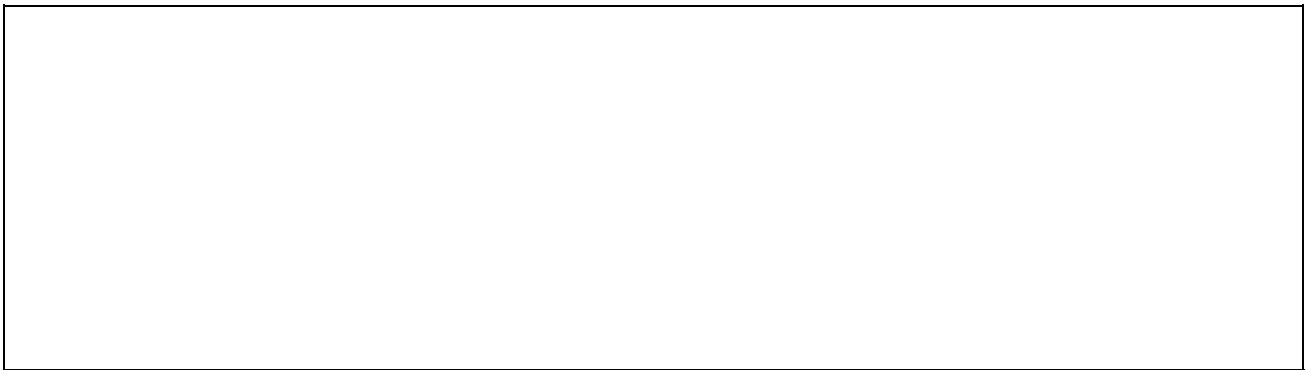
Pricing



The sales operations



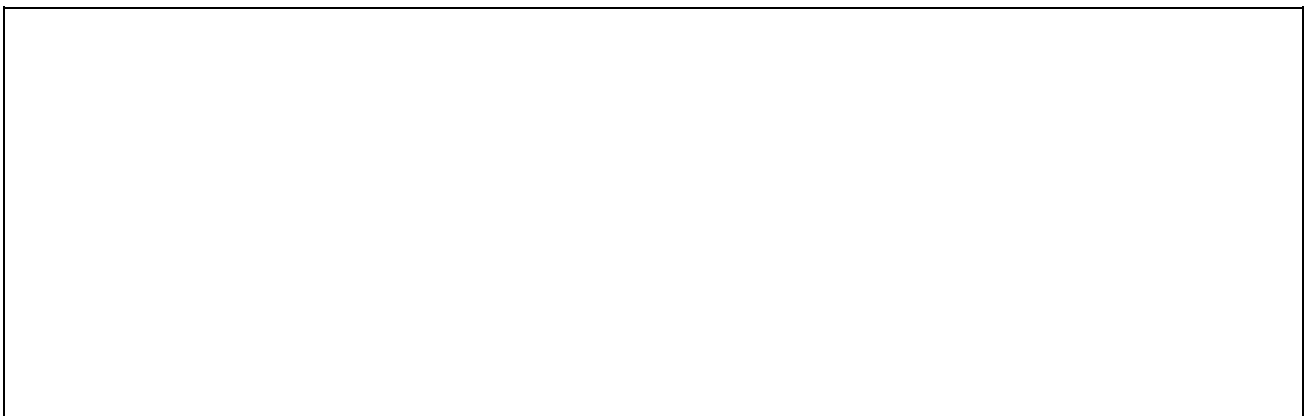
Organising the purchases. Chain or wild? Storage?



Transportation, delivery of the goods and services to the customers?



Services and administration (offers, orders, book keeping, wages and agreements)



2.2.3 Financial Analysis of the Company

2.2.4. Capital need

1. Investment schedule - .

| Target | cost |
|-----------------------------|------|
| Machinery | |
| | |
| Equipment | |
| | |
| Buildings | |
| Other long term investments | |
| | |
| Total | |

2. Short term working capital

| | |
|---|--|
| Inventories | |
| Cash needed at the beginning before cash flow | |
| Total | |

| | |
|--|--|
| CAPITAL TOTAL (investments + working capital, transfer to total financing next page) | |
|--|--|

2.2.5 Financial Plan

| | |
|------------------------------------|--|
| + equity capital | |
| cash | |
| other property | |
| operating income (net cash inflow) | |
| + borrowed capital | |
| banks | |
| Finnvera | |
| other | |
| + subsidies | |
| TE-centre | |
| other | |
| = FINANCING TOTAL | |

Securities:

| |
|--|
| |
|--|

2.2.6 Projected Profit and Loss Statement

| | |
|---------------------------------------|--|
| <i>1.1.1 net profit</i> | |
| + loan repayments | |
| + interests | |
| = need for net profit | |
| + operating fixed expenses: | |
| gross wages | |
| social security expenses | |
| rent | |
| electricity and water | |
| travel expenses | |
| repairs and maintenance | |
| marketing and PR | |
| purchase of services (fixed) | |
| entrepreneur's pension (YEL) | |
| entrepreneur's unemployment insurance | |
| insurance | |
| other | |
| = need for gross profit | |
| material purchases | |
| = turnover | |
| + value added tax (VAT) 22 % | |
| = Total sales | |

2.2.8 SWOT –analysis of the Company

SWOT-analysis

| | |
|---|------------|
| Company's internal | |
| Strengths | Weaknesses |
| in environment and in the future (external) | |
| Opportunities | Threats |

3. Strategic Planning

3.1 Choice of the Generic Strategy

Alternatives are:

| | |
|---------------------|-------------------------|
| Low cost leadership | Differentiation |
| Focus (low cost) | Focus (Differentiation) |

Generic strategy of the Company is
because

3.2 Customers:

| Customers /target groups | Customer's special needs for products and services | | | |
|-----------------------------|--|--|--|--|
| | | | | |
| | | | | |
| | | | | |

3.3 Product Portfolio Strategy

Classify Company's products

| | |
|---------------------------|--------------------------------|
| <i>Star products :</i> | <i>Question mark products:</i> |
| <i>Cash Cow products:</i> | <i>Dog products:</i> |

3.4 Conclusion of the Strategy (Actions to make the Strategy concrete, what do you do?)

| | | |
|--|--|--------------------------------|
| | Company's internal | |
| | Strengths | Weaknesses |
| in environment and in the future (external) | | |
| Opportunities | Utilize (succes strategy) | Develop (development strategy) |
| Threats | Get prepared for (substitute strategy) | Avoid (existencestrategy) |

4. Vision

4.1. Company's values and vision

Company's values are:

Company's vision is: (up to 5 years)

5. Risk Management

Company's external risks are:

Company's internal risks are:

How does the Company manage risks? (remove, decrease, transfer risks)

ROXI Entrepreneurship Training Programme

ROXI – Case Study of Rostock University

Doreen Holtsch & Melanie Hoppe

Rostock University
Chair of Economic and Business Education

1. Learning Goals

| | |
|------------------|--|
| content-related: | promoting personal entrepreneurial competencies implementing a competence-analysis using creativity methods (e.g. Brainstorming) implementing a SWOT-analysis on business ideas |
| soft skills: | promoting empathy developing skills to reduce complexity |

2. Executive Summary

This case demonstrates a situation from ROXI entrepreneurship courses held at the University in Rostock (Germany).

The case focuses on the content of the first week of a full time course with a full duration of three weeks. The aim of this particular week is to define a clear business idea which corresponds to the potential entrepreneur. The trainer is challenged with a diversity of participant's qualifications and needs. Main tasks of the trainer are

- to get familiar with the entrepreneur and their business ideas;
- to instruct the participants to critically evaluate their ideas;
- to use a broad mix of different instruments, e.g. creativity methods, Johari-Window or SWOT-analysis;
- to create an atmosphere in which not just knowledge is being delivered, but the participants' action and personal development is in the focus.

3. Background

3.1. Institutional background of the programme “roxi”

The Rostock entrepreneurship initiative roxi (ROstocker-eXistenzgründer-Initiative) was founded in 1997/1998 by the Institute for Human Resource Development, the forerunner of today's Hanseatic Institute for Entrepreneurship and Regional Development – HIE-RO¹.

Before 1997, no specific entrepreneurship education was offered at the University of Rostock. The programme roxi (ROstocker-eXistenzgründer-Initiative) aimed to close this gap with its training courses.

Background of the idea to start roxi was amongst others the high regional unemployment and low economic growth rate in the region Mecklenburg-Western Pomerania.² The innovation of an entrepreneurship training programme was thought as a long-term-approach to contribute to regional growth and at the same time to offer a new and so far missing stepping stone for potential entrepreneurial talents with university background in the region of Rostock. The initiative for the Rostock entrepreneurship initiative roxi took off at the Chair for Economics and Business Education. Two members of the Chair and other supporters first took initiative to establish a new institute at the University of Rostock. The foundation of the Institute for Human Resource Development in the year 1997 created (as a first step) the needed new platform for the later entrepreneurship training as a supplement to the regular University courses.

Since the year 1997, the financing for roxi is provided by the European Social Fund together with funding by the Ministry of Labour and Economy of the German State of Mecklenburg-Western Pomerania. This funding background is one of the reasons why the number of created start-ups and new jobs are some dominant success indicators which roxi has to deal with.

While in the year 1997 roxi was a new programme, an empirical survey in 2005 among students at the University of Rostock emphasised its popularity - 87 percent of the students are aware of the courses offered by roxi and the project itself³.

Since the beginning, roxi aims to inspire entrepreneurial spirit and to support people (especially students, graduates and scientific staff) in setting up business. In doing so, the initiative's philosophy is: *not everybody is born as an entrepreneur but can learn to act as one*. The aim is to stimulate sustainable entrepreneurial businesses and to support the process of founding a business through effective training, coaching and consulting. roxi seeks to promote entrepreneurial thinking at the University and to smoothen the way into professional independence by setting up a personal business.

The target group are students, graduates, researchers and study drop-outs from different faculties. The roxi - trainers are teaching along the “learning-by-doing” approach by mainly using the action learning method. However, this method facilitates real entrepreneurial competencies through providing a mix of knowledge, attitude, skills and customs combined with economic and business know-how.

Twice a year a full time roxi-course is offered during summer and spring break with a duration of three weeks or 120 training hours. During the semester on Friday evenings and on Saturdays a part-time course is offered over a period of ten weeks.

While regular university courses are so far free of charge in Germany, roxi asks for small participant fees. Participation costs roughly 100 EUR for a three week course. The idea behind the fee is twofold: (1) to keep free-riders out of the course and to support commitment by setting up a small barrier, and (2) to cover cost (e.g. for catering/ drinks/ fruits) which otherwise could not be paid out of the given programme funding.

¹ Further information are available on: www.hie-ro.de

² Braun, G.; Diensberg, C.; Mechthold-Jin, M.: Mut zur Selbständigkeit, Gründungstraining und Gründungsforschung am Institut für Human Resource Development, in: *Traditio et Innovatio*, Forschungsmagazin der Universität Rostock, 3 (1998), 1, S. 13-16.

³ Wilde, Kerstin (2005). Entrepreneurship Education – konzeptionelle und didaktische Herausforderungen. Kompetenz für Komplexität? – Ergebnisse der Studentenbefragung in Rostock 2003. Eine Studie von ROXI, Rostocker Existenzgründer Initiative in Zusammenarbeit mit GründerFlair, Netzwerk für Existenzgründungen aus Hochschulen in Mecklenburg-Vorpommern. Rostocker Arbeitspapiere Nr. 24. Rostock.

3.2. The Action Learning Method

Reg Revans is one originator of the action learning method. He itself describes it as “freedom from teachers, from any kind of printed syllabus or regulations, from any fixed institution, or even from any literature”.

Revans describes his approach in a formula⁴: $L = P + Q$ where the variables L, P and Q are learning, programmed knowledge and questioning. The questioning part is regarded as central in which the nature of the problem is being clarified and possible solutions are identified. This group process generates a dialog through which innovative thinking is generated.

Generally speaking action learning is another form of the Problem-Based-Learning approach. Main distinction is the fact that the “problem” needs to be real. The groups consist of 4 – 6 members, at the end an action plan has to be elaborated by the group and real actions have to be undertaken.

The coach or teacher takes the role of a moderator or rather advisor. He has the task to facilitate the process of the single members, to reflect the periods of learning and problem solving. In doing so he has to support the dynamic in the group by reflecting the feedback given among the group members and to assure that the established procedural rules are obeyed. In a next step, together with the participants, he reflects the elaborated solution. Therefore it is important to document every step. Through questions the trainer requests the participants to give objective reasons and to judge the solution.

All together the focus of the seminar is on the participants and the trainer has to be in control of several tasks, e.g.:

- analysing the target group;
- analysing the training demand;
- planning the team work, team and problem solving;
- developing a training plan;
- proper use of teaching and learning material;
- “Icebreaker” and “Energiser”;
- moderating the group reflection;
- evaluating the target.

3.3. Setting the scene

It is February 2005 and last week the spring break started. Six people signed in for the roxi course. The different topics and exercises require a lot of different locations. Due to this the roxi employees organize different facilities at the University. All rooms are equipped with video-projector and moderation equipment.

The different topics and exercises require experts with different competencies. Due to this in each course approximately 13 trainers are involved; e.g. while one trainer is responsible to raise the participant’s awareness and to develop their entrepreneurial competencies; another trainer is responsible to develop, select and screen the participant’s ideas. The twelve roxi course modules are organised along the four CEFE⁵ - stages:

⁴ IFAL – International Foundation for Action Learning <http://www.ifal.org.uk/brief.html> (am 24. November 2007)

⁵ The Competency based Economies Formation of Enterprise is a set of training methods using an action-oriented approach. “CEFE’s main objective is to improve the entrepreneurial performance of economic actors through guided self-analysis, simulating enterprising behaviour, and the build up of business competencies” (www.cefe.net/forum/CEFEshort.pdf). More information are available on www.cefe.net

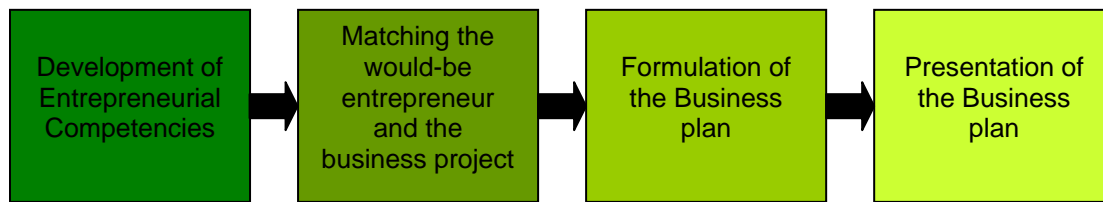


Figure 1: CEFE-stages (CEFE – Manual for Trainers (1998). CEFE – International)

Since 2002 Mrs. Meier is the project leader of roxi. Working as a consultant in the business and development aid sector she gathered comprehensive knowledge and experiences in educating entrepreneurs. Within the roxi training she is doing the course introduction in which the focus is to analyse the participant's competencies. Furthermore, she is the participant's contact person regarding all matters during the whole course.

Another trainer from the trainer pool is Mr. Bunge. He is working as a freelancer for roxi. Next to this he is involved in the physiotherapy practice of his wife where he is responsible for all managerial and administrative matters. This is now his third time working for roxi. His specialisation is to coach the potential entrepreneurs to generate and to set up a business idea.

4. Case Description

To assign for the roxi training the participants fill out a standard form to provide the necessary contact details. But of course this form doesn't provide the trainer with further information concerning the business idea, the course motivation, etc. Due to this, for every course Mrs. Meier invites the "would-be entrepreneurs" to an individual meeting. During this meeting she receives a rough impression of the person and the motivation.

This year the situation is as follows: Mrs. Meier meets Anke and Christian before the roxi course; Mario, Marie and Konrad can't come to a meeting with Mrs. Meier in advance and Anna is already known out of the working context

About working with Anna she knows the following: Anna is 28 years old and is working as a research assistant at the University at the Chair of Economic and Business Education since 1,5 years. She is writing her PhD in the field of entrepreneurial intentions of students in vocational education. After finishing high school Anna worked as a social insurance clerk. Although Anna is working in Rostock she is living in Berlin in a common law marriage. In her spare time she is a frequent runner. Her business idea is a floating shower in Berlin's parks for runners.

Anke is 24 years old and just finished her studies in social pedagogic in Cologne. Currently she is jobless and living at her parents' place nearby Rostock. In her spare time Anke is acting on an "open-stage" for amateurs. Due to her professional situation her father is pushing her to do something. He is a friend of Mr. Bunge, who recommended the roxi course to Anke. After contacting the roxi office she met Mrs. Meier. During the interview Mrs. Meier had the impression that Anke is a creative person with a lot of curious ideas, e.g. holding humorous funeral eulogies or laughing therapy.

Christian was sent by the labour office to the roxi course. He is 35 years old, living in a common law marriage with one child in the city of Demmin (approx. 70 km distance from Rostock) and is currently unemployed. The labour office provided him with a vocational retraining as a system administrator. Furthermore, it will provide financial support for his start-up after finishing this entrepreneurship-course and having worked out a business plan. His idea is to start up a business as a mobile system administrator, serving the customer on the spot.

1st day – Introducing each other

In each roxi-course Mrs. Meier is using the first day to gather more information about the participants and to introduce them to each other. Their task is to create a collage made out of old newspapers and magazines through which the participants have to explain their private and professional background, their current situation and their life-visions.

Finishing the collages Marie is the first who wants to present her results. Marie is 25 years old and still studying to become a teacher for English and German language. While studying she is working as a bar tender at a club in Rostock in the evenings. During the days she is exercising a lot in the sport studio. Her project idea is to provide small and medium sized companies with English courses on the spot. It appears that Marie has strong communication skills.

Based on the collages Mrs. Meier receives the following information about Konrad: He is 27 years old and finished studying Informatics and Digital Media at the University for Applied Science in Brandenburg two years ago. During his studies he worked for example for the company Tele-Factory in Potsdam-Babelsberg (located close to the city of Berlin, approx. 250 km distance from Rostock) where he was responsible for setting up a DVD department. Furthermore, Konrad and his business partner convinced the board of the Bechstein Company (piano-maker) to produce an advertisement DVD. This special project, with a duration of more than one year, was very successful and Konrad and his colleague Stephan started an own company “muxlab”. Together with Mario he wants to start a business in the field of IT-training.

Konrad and Mario are good friends who grew up together in Havelberg a small city close to Berlin. Mario had to leave University recently as he didn't pass an examination. In the presentation he mainly leaves the impression that he is kind of disoriented and lacking a clear vision for the start-up company, while Konrad explicitly expressed his visions and ideas. Most of Konrad's ideas have already been implemented although they are still in their starting phases. So in general it has to be mentioned that Konrad is involved in several other projects during the whole training. Furthermore, it appeared that Mario possesses the licence to work as a trainer for autogenic training, without actively practicing it.

The collages of the other participants reflect and support Mrs. Meier's impression about the respective person.

As usual Mrs. Meier is finishing the day with an introduction into “How to write a business plan”. She is providing the participants with a fact sheet which contains the main structure for writing a business plan and is explaining the single steps: business idea, marketing, production, organisation and management, financing. During the whole course the business plan accompanies the participants. Following the single tasks and sessions each day, time is given to them to work out their business plan.

2nd day – Getting to know about general entrepreneurial competencies

Regarding Mrs. Meier's experience some of the participants usually lack knowledge about the tasks, challenges and even risks of entrepreneurs due to missing contacts with people who have already started a business. To provide the participants with an idea about this “mysterious” group of people *entrepreneurs*, she shows a short-movie about entrepreneurial competencies and success cases. Within the movie the participants learn, how experienced entrepreneurs handle challenges and accept defeats. Other points stressed are the combination of private and professional life, dealing with doubts as well as with the constant search for new ideas. Following this, their task is to select the entrepreneurial competencies from the people they “meet” in the movie – generalise entrepreneurial behaviour and special characteristics of entrepreneurs.

Finishing the movie session Mrs. Meier is introducing the Johari Window method (see “Supporting Material II”) to the participants. They are asked to evaluate their own individual behaviour with this method. The method's aims are twofold. On the one hand it can support the interpersonal relationship between the group members through introducing feed-back rules etc. On the other hand it provides self-disclosure for the single person. Group members can react very different on this method; while some are reticent others are open and curious. Anna and Marie asked very inquisitively how the method is working and what the expected results are. The male participants seem to be less interested and offended by it.

Part of the task is a reflection of the self-evaluation by the group including an external evaluation through its members. Mrs. Meier is providing all participants with a working paper that shows the figure of the Johari Window but not as usual with the original 55 adjectives. To ease the task, own adjectives could be used by the participants instead of using the standard words. For some of the participants the gap between self and external evaluation is very surprising and in some cases even hard to accept.

The roxi-participants usually spent their lunch breaks together in the nearby student cafeteria – sometimes with the trainers, sometimes without. Their talks during the breaks are mainly dominated by discussions about their business ideas and possible problems they might face. During these breaks a grouping becomes visible. While Konrad and Mario are pretty often together; Christian is more reserved. Anna and Anke giggle a lot. Very seldom Marie is joining the group because she is using the breaks to organise other things.

After the lunch break Mrs. Meier is introducing the action learning game “Ball fabric”⁶ (see Appendix 1) to stimulate the personal creativity and innovation competencies. The “Ball fabric” is one method from the action learning approach. Therefore she is asking the participants to form a circle. In doing so the participants simulate a production chain in which everybody is providing service to produce “something”. The product is represented by the ball. The game starts with one ball. The participation of everybody is necessary for the “production process” which is represented by handing over the ball to the other group members. The “production process” is completed when the ball is back to the beginning of the chain. While doing so Mrs. Meier is taking the time and counting the mistakes (dropping the ball). The results are visualised on a flip chart. In the next stage two more balls are used and the task is to do the same process in a more efficient time frame and to minimize the failure rate to zero.

The trainer is pushing the group more and more to stimulate innovations and support creative thinking. So in general the trainer (Mrs. Meier) is taking the role of a “competitor”, through putting pressure on the entrepreneurs. This pressure leads to a situation which forces the young entrepreneurs to think innovatively and figure out new ideas. The game’s main issue is to show the participants how to handle a situation where pressure is put on them from outside and still being open for innovations.

The most innovative idea for transporting the ball and reducing the failure rate gave Konrad. He suggested that all participants form a very close circle so that just one person is holding the ball in the middle of the circle and everybody is touching it. However, due to this the failure rate can be reduced to zero and the least time is needed.

Finishing the game Mrs. Meier is discussing the question: What has to be done by an entrepreneur to assure and promote improvement and progress? Putting the focus on the games evaluation the appraisal of this game usually takes twice as long as the game itself. It stresses the importance of innovation and external impulses to stay competitive.

3rd day – Evaluation of one’s own entrepreneurial competencies

On the next day Mrs. Meier is providing the participants with the Personal Entrepreneurial Competencies – Questionnaire (see “Supporting Material III”). The questionnaire contains 55 items which have to be ranked on a scale from 1 (never) to 5 (always). Summarizing these items to 10 competency categories the participants finally receive an overview about their entrepreneurial competencies which they already possess at the beginning of the training.

Finishing this questionnaire the participants spent the afternoon with information seeking via internet or personal and telephone interviews.

⁶ The game „Ball fabric“ is one example for the action-learning approach. Instead of listening, the participants are actively involved.

4th day – Business idea generation and evaluation

Mr. Bunge has been invited by Mrs. Meier for another session regarding the topic - idea generation and evaluation. This topic includes the following: overview of creativity techniques, e.g. brainstorming, idea screening and SWOT-analysis.

To warm up the participants, Mr. Bunge as usual starts with a SWOT-analysis of each business idea. Therefore the participants are asked to use the SWOT-table and to evaluate their own ideas regarding its strengths; weaknesses; opportunities and threats (see "Supporting Material IV").

Following Mr. Bunge is introducing different methods to generate new ideas. For some of the participants it seems to be very difficult to make use of these methods and to get acquainted with new ideas; e.g. Christian. He is very focused on his idea and doesn't want to "waste" his time with finding new ones. Anna is very innovative and immediately creates 20 new ideas. Meanwhile it became visible that Konrad and Mario are not convinced anymore about starting a business together. But instead of being even more creative and looking for new ideas for themselves, Konrad stays with his idea and doesn't want to change it and Mario is absolutely discouraged.

Their task is to find 50 new ideas in the first step, which is impossible for all of them immediately. Due to this Mr. Bunge is always asking the group to generate new ideas for each member. This process is supporting the group dynamics and opens the participants' mind for new ideas. Usually roxi participants really enjoy this task because funny and absurd ideas are generated which would have never been contemplated by the single person (see "Supporting Material V").

In a second step the ideas have to be evaluated by the participants regarding their feasibility. A selection out of the 50 ideas has to be undertaken and evaluated regarding the questionnaires. The questionnaires are designed in such a way that they are connecting the new idea with the persons' strengths and weaknesses and the market potential (see "Supporting Material III").

The results show that Anna's idea doesn't fit to her competencies but some new generated ideas are much more suitable for her. Marie's idea seems to fit to her but she recognizes that too many competitors are on the market that could hamper the market entry. Due to her "strange" ideas it is almost impossible for Anke to evaluate the market potential of her ideas, e.g. the demand and existing networks.

In the evening Mr. Bunge is meeting Mrs. Meier to give her the results of the day. She is very amazed about them, especially regarding the results for Anna. On the next day she is talking with each participant about it. In Anna's case she agrees to the fact that Anna is lacking the necessary competencies to realise her idea but because Anna is brimming over for enthusiasm for it, Mrs. Meier is encouraging Anna in her idea.

5. Further Reading

Action Learning Method

- Marquardt, M.J. (1999). Action learning in action. Palo Alto, CA: Davies-Black.
- Pedler, M. (1991). Action learning in action. Palo Alto, CA: Davies-Black.
- Raelin, J.A. (2000). Work-based learning. The new frontier of management development. Reading, MA: Addison-Wesley.
- Reichert, A. (2006). The trainer in Entrepreneurship Education. In: Braun, G. / Diensberg, Ch. / Kadler, S. / Reichert, A. / Wilde, K. Entrepreneurship Education – Challenge for Universities in the 21st century. Rostock Working Papers on Economic and Human Resource Development. No. 25. Rostock. p 97 – 140.
- Revans, R. (1980). Action Learning: New techniques for management. Blond & Briggs, Ltd., London.
- Wilde, K. (2006). Constructivist Curriculum for Would-Be-Entrepreneurs' Training. In: Braun, G. / Diensberg, Ch. / Kadler, S. / Reichert, A. / Wilde, K. Entrepreneurship Education – Challenge for Universities in the 21st

century. Rostock Working Papers on Economic and Human Resource Development. No. 25. Rostock. p 63-96.

Task 2

- Brandstätter, H. (1997). Becoming an entrepreneur – a question of personality structure? In: Journal of Economic Psychology. p. 172.
- Brockhaus, R.H. / Horwitz, Pamela (1987). Psychology of Entrepreneur. In : Sexton, D.L. / Smilor, R. (eds). The Art and Science of Entrepreneurship. Cambridge, Ballinger, Mass. Publishing Company. p 25-48.
- Commission of the European Communities (2003). Green Paper: Entrepreneurship in Europe. http://ec.europa.eu/enterprise/entrepreneurship/green_paper/green_paper_final_en.pdf

Task 3

- Beck, Charles E. (1994). Perspectives on the Self in Communication: The Cognition Continuum and the Johari Window (Theory and the Profession). In: Technical Communication: Journal of the Society for Technical Communication. November 1994. p 753-56.
- Perreault, Gerri (2002). Self-Knowledge and Leadership: The Johari Window. In: Campus Activities Programming. October 2002. p 64-66.
- Shirland, Larry / Polczynski, James J. (1984). Dynamic management communication exchange: A mathematical model of information flow through the Johari Window. In: Journal of management studies. p 21-27.

Task 4

- Levy, M. / Delahoussaye, M. (2000). Reg Revans: A Man of Action. Training Journal.
- Revans, R. W. (1979). Action Learning. Blond and Briggs. London.
- Revans, R. (1998). ABC of action learning: Empowering managers to act und to learn from action. London: Lemos & Crane.

Task 5

- CEFE – International (1998). CEFE-Manual for Trainers. Part IV – Exercises 3.2.2.
- www.cefe.net

Task 6

- Dimo Dimov (2007). Idea generation from a creativity perspective. In: Entrepreneurship; Vol. 2: Process - Westport, Conn. [u.a.] : Praeger, . - 2007, p 19-41.

Task 7

- CEFE – International (1998). CEFE-Manual for Trainers. Part IV – Exercises 4.2.3.
- www.cefe.net

6. References

- Sexton, Donald L. / Landström, H. (ed.) (2000). The Blackwell handbook of entrepreneurship. In conjunction with the School of Business and Entrepreneurship at Nova Southeastern University. Malden, MA. Blackwell Business [u.a].
- Blenker, P., Dreisler, P. & Kjeldsen, J: Entrepreneurship Education –the new Challenge Facing the Universities, Aarhus Business School, Working Paper 2006-02, March 2006
- Edelson, P. J.: Enhancing creativity in adult and continuing education: innovative approaches, methods, and ideas, San Francisco : Jossey-Bass, 1999
- Gibb, Allan: Towards the Entrepreneurial University, ncge policy paper 003, May 2005, to be downloaded via: http://www.ncge.org.uk/downloads/policy/Towards_the_Entrepreneurial_University.pdf
- Kirby, David A.: Entrepreneurship, McGraw-Hill Education, 2003
- Kolb, D.A.: Experimental Learning, San Francisco, 1984
- Reichert, A. (2006). The trainer in Entrepreneurship Education. In: Braun, G. / Diensberg, Ch. / Kadler, S. / Reichert, A. / Wilde, K. Entrepreneurship Education – Challenge for Universities in the 21st century. Rostock Working Papers on Economic and Human Resource Development. No. 25. Rostock. p 97 – 140.
- Shirland, Larry / Polczynski, James J. (1984). Dynamic management communication exchange: A mathematical model of information flow through the Johari Window. In: Journal of management studies. p. 21-27
- Sonnentag, S., Niessen, C. & Ohly, S.: Learning at Work: Training and Development, in: L. Cooper & I.T. Robertson (Eds.): International Review of Industrial and Organizational Psychology 2004, pp 249-289, Chichester, England: Wiley, 2004
- Sternberg, R. J.: Handbook of creativity. Cambridge Univ. Press, 1999
- Takeuchi, H. and Nonaka, J.: Hitotsubashi on Knowledge Management, Singapore: John Wiley & Sons, 2004
- Wilde, K. (2006). Constructivist Curriculum for Would-Be-Entrepreneurs' Training. In: Braun, G. / Diensberg, Ch. / Kadler, S. / Reichert, A. / Wilde, K. Entrepreneurship Education – Challenge for Universities in the 21st century. Rostock Working Papers on Economic and Human Resource Development. No. 25. Rostock. p 63-96.

7. Task

- 1 Describe the course atmosphere and the participants' situation. Which problems might arise?
- 2 Use the attached table to derive the single participant's strengths and weaknesses. Develop an entrepreneurial perspective for each participant based on this table (advantages of being an Entrepreneur).
- 3 Test the Johari-Window on yourself and pay special attention to method-specific problems. In a next step write a comprehensive teaching plan for introducing the Johari Window method.
- 4 Select two more action-learning methods and develop for each a short teaching note.
- 5 Make a competency analysis for yourself using the PEC-questionnaire. Develop a teaching plan to lead the participants through this task.
- 6 Select 5 creativity methods for idea generation you would suggest to the participants. Explain your choice. Explain how you would introduce these methods to the participants.
- 7 Different ways exist to assess the person and the ideas – the evaluation of the idea based on SWOT, the evaluation of the idea regarding the person, the idea evaluation regarding the market evaluation. Develop a grid with different criteria and a rating system through which the participants can evaluate their ideas.
- 8 Which outcomes of the idea-person-comparison are possible? Develop different strategies to cope with these situations. Please take into consideration that at the end of your course each participant should have just one concrete business idea.

Supporting Material

| | |
|--------------------------------|-----------------------------------|
| Supporting Material I | Participants' overview |
| Supporting Material II | Johari Window |
| Supporting Material III | PECS questionnaire |
| Supporting Material IV | SWOT Analysis |
| Supporting Material V | Alternative Business Ideas |

Supporting Material I
Participants' overview

| | Participant 1 | Participant 2 | Participant 3 | Participant 4 | Participant 5 | Participant 6 |
|----------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Age | | | | | | |
| Gender | | | | | | |
| Family status | | | | | | |
| Vocational Education | | | | | | |
| University Education | | | | | | |
| Employment status | | | | | | |
| Strengths | | | | | | |
| Weaknesses | | | | | | |
| Interests | | | | | | |
| Business Idea | | | | | | |

Supporting Material II
Johari Window

Source: Shirland, Larry / Polczynski, James J. (1984). Dynamic management communication exchange: A mathematical model of information flow through the Johari Window. In: Journal of management studies. p. 21-27.

Johari Window

| | Known to Self | Not known to Self |
|--------------------|---------------|-------------------|
| Known to Group | I Arena | II Blind |
| Not known to group | III Facade | IV Unknown |

Additional Explanations:

Pane I (Arena): Contains information that is known to both the individual and the group and is characterised by on open exchange of information. The size of this pane increases as feedback occurs and information is released from other panes.

Pane II (Blind): Contains information known to the group but not to Self. The size of this pane is an indication of the degree that feedback is given or accepted.

Pane III (Facade): Contains information that is being withheld from the group. As trust develops, information will flow from this pane to the Arena.

Pane IV (Unknown): Contains information unknown to both, the individual and the group. Through the feedback process some of this information will transfer to the Facade and Blind areas as some things become known to the individual while others become known to the group.

Supporting Material III
PECs Questionnaire

Source: CEFE – International (1998). CEFE-Manual for Trainers.

PECs self-rating questionnaire

INSTRUCTIONS

I. This questionnaire contains 55 sentences. Read each one and decide which describes you better. Be honest to yourself! The questionnaire's purpose is to help you to make a self-evaluation; it is no test and there is no correct/wrong answer.

II. Choose the number associated to the sentence that best describes your behaviour:

1. never
2. seldom
3. sometimes
4. most of the times
5. always

III. Write down the chosen number beside each sentence.

See example:

| No. | Item | Assessment |
|-----|---|------------|
| 1. | I keep myself calm in tense situations. | 2 |

The person considered feels that the situation above seldom describes his/her behaviour; therefore he/she writes the number 2 beside the sentence.

| No. | Item | Assessment |
|-----|--|------------|
| 1. | I look for things that need to be done. | |
| 2. | When I face a problem, I spend a lot of time trying to find a solution. | |
| 3. | I do things before they become urgent. | |
| 4. | I get upset when things are not done well. | |
| 5. | I prefer situations in which I can control the results. | |
| 6. | I like thinking about the future. | |
| 7. | When I start a work or a project, I gather all possible information available. | |
| 8. | I plan a big job by dividing it into several small tasks. | |
| 9. | I get support by others for my suggestions. | |
| 10. | I feel I will be succeeded in any activity I engage. | |
| 11. | I listen carefully to any person who talks to me. | |
| 12. | I do things that have to be done before others ask me to do so. | |
| 13. | I insist several times to get someone to do what I want. | |
| 14. | I keep my promises. | |
| 15. | My results at work are better than those from people who work with me. | |
| 16. | I don't try new things without making sure I will succeed. | |
| 17. | It's a waste of time to think about what to do with one's life. | |
| 18. | I search for advice from people who know about the different aspects of my business. | |
| 19. | I carefully analyse the advantages and disadvantages of the several ways to execute tasks. | |
| 20. | I don't spent a lot of time thinking how to influence other people's ideas. | |
| 21. | I change my way of thinking if other people strongly disagree with my point of view. | |
| 22. | I get upset, when I don't do what I want. | |
| 23. | I like challenges and new opportunities. | |
| 24. | When something hinders what I am trying to do, I try to find other ways to | |

| No. | Item | Assessment |
|-----|--|------------|
| | accomplish my task. | |
| 25. | I like to do other people's work when it is necessary to accomplish a task in time. | |
| 26. | I get upset when I waste time. | |
| 27. | I calculate the risk before get started. | |
| 28. | The more I can express my expectations the sooner I will achieve it. | |
| 29. | I often do things without looking for information concerning the task. | |
| 30. | I try to anticipate all the problems that might happen and think of what can be done in case any of them take place. | |
| 31. | I seek important people to help me reach my goals. | |
| 32. | When I try something difficult or something that challenges me, I feel confident I will succeed. | |
| 33. | I have failed in the past | |
| 34. | I prefer to accomplish tasks that I dominate and feel safe doing. | |
| 35. | When I face a great difficulty, I look for other tasks. | |
| 36. | When I am doing something for another person, I make a lot of efforts so he/she is very satisfied with my work. | |
| 37. | I am never fully satisfied with the way things are done, I always think it could be done better. | |
| 38. | I do risky things. | |
| 39. | I have a clear vision of where I intend to get in the future. | |
| 40. | When I have to do a job for someone, I ask many questions to be sure that I understood what he/she wants. | |
| 41. | I face problems when they appear instead of anticipating them. | |
| 42. | When trying to reach my goals, I look for solutions that would be positive for all people involved. | |
| 43. | I am doing a good job. | |
| 44. | There have been times when I took advantage of people. | |
| 45. | I try to find new tasks, different from the ones I have already done. | |
| 46. | I try several ways to overcome the obstacles that disturb the accomplishment of my goals. | |
| 47. | I don't let my work interfere with my personal life. | |
| 48. | I can't find ways of doing things faster. | |
| 49. | I do things other people judge as risky. | |
| 50. | Achieving my weekly goals is as much as important as achieving my annual goals. | |
| 51. | I look for different sources of information that could help me in my tasks and projects. | |
| 52. | If a way of solving a problem doesn't work out, I try another. | |
| 53. | I can change people's opinion even with strongest points of view. | |
| 54. | I stick to my decisions, even when other people strongly disagree with me. | |
| 55. | I have no problems to recognize something I do not know. | |

INSTRUCTIONS SCORE SHEET

- I. Write down the answer for each sentence on the lines above the correspondent number of the statement.
Note that the numbers of the statements are serial in each column.
- II. Make the calculation indicated in each line to compute the points for each characteristic.
- III. Sum up all the points obtained for each characteristic to obtain the total score.

| Rating for the statements | Score | PEC |
|---|-------|---|
| $\frac{+}{(1)}$ $\frac{+}{(12)}$ $\frac{-}{(23)}$ $\frac{+}{(34)}$ $\frac{+}{(45)}$ 6 = | _____ | Searches for possibilities |
| $\frac{+}{(2)}$ $\frac{+}{(13)}$ $\frac{-}{(24)}$ $\frac{+}{(35)}$ $\frac{+}{(46)}$ 6 = | _____ | Is perseverant |
| $\frac{+}{(3)}$ $\frac{+}{(14)}$ $\frac{+}{(25)}$ $\frac{-}{(36)}$ $\frac{+}{(47)}$ 6 = | _____ | Knows the importance of fulfilling tasks |
| $\frac{+}{(4)}$ $\frac{+}{(15)}$ $\frac{+}{(26)}$ $\frac{-}{(37)}$ $\frac{+}{(48)}$ 6 = | _____ | Is aware of opportunities and takes advantages of them |
| $\frac{-}{(5)}$ $\frac{+}{(16)}$ $\frac{+}{(27)}$ $\frac{+}{(38)}$ $\frac{+}{(49)}$ 6 = | _____ | Is risk-oriented |
| $\frac{-}{(6)}$ $\frac{+}{(17)}$ $\frac{+}{(28)}$ $\frac{+}{(39)}$ $\frac{+}{(50)}$ 6 = | _____ | Is objective-oriented |
| $\frac{+}{(7)}$ $\frac{+}{(18)}$ $\frac{+}{(29)}$ $\frac{+}{(40)}$ $\frac{+}{(51)}$ 6 = | _____ | Searches for information |
| $\frac{+}{(8)}$ $\frac{+}{(19)}$ $\frac{-}{(30)}$ $\frac{+}{(41)}$ $\frac{+}{(52)}$ 6 = | _____ | Makes systematic planning and monitoring |
| $\frac{-}{(9)}$ $\frac{+}{(20)}$ $\frac{+}{(31)}$ $\frac{+}{(42)}$ $\frac{+}{(53)}$ 6 = | _____ | Is persuasive and aware of the importance of networking |
| $\frac{-}{(10)}$ $\frac{+}{(21)}$ $\frac{+}{(32)}$ $\frac{+}{(43)}$ $\frac{+}{(54)}$ 6 = | _____ | Is self-confident |
| $\frac{-}{(11)}$ $\frac{-}{(22)}$ $\frac{-}{(33)}$ $\frac{+}{(44)}$ $\frac{+}{(55)}$ 18 = | _____ | Correction Factor |

FINAL SCORE = _____ (Entrepreneurial Profile)

**EXCURS:
CORRECTION FACTOR FOR SELF-ASSESSMENT**

I. The correction factor is used to evaluate whether someone is trying to portray oneself to positive. When this factor scores 20 or more, the evaluation of the entrepreneurial profile has to be corrected.

II. Use the following figures to correct the assessment.

If the correction factor scores: Reduce each PEC score by:

| | |
|------------|---|
| 24 or 25 | 7 |
| 22 or 23 | 5 |
| 20 or 21 | 3 |
| 19 or less | 0 |

III. Use the following table for the corrected scores:

| Profile | Original score | Correcting figures | Corrected score |
|---|----------------|--------------------|-----------------|
| Searches for possibilities | | | |
| Is perseverant | | | |
| Knows the importance of fulfilling tasks | | | |
| Is aware of opportunities and takes advantages of them | | | |
| Is risk-oriented | | | |
| Is objective-oriented | | | |
| Searches for information | | | |
| Makes systematic planning and monitoring | | | |
| Is persuasive and aware of the importance of networking | | | |
| Is self-confident | | | |

PECS Self-Rating Questionnaire - Results

| Profile | Score | | | | | |
|---|-------|---|----|----|----|----|
| | 0 | 5 | 10 | 15 | 20 | 25 |
| Searches for possibilities | | | | | | |
| Is perseverant | | | | | | |
| Knows the importance of fulfilling tasks | | | | | | |
| Is aware of opportunities and takes advantages of them | | | | | | |
| Is risk-oriented | | | | | | |
| Is objective-oriented | | | | | | |
| Searches for information | | | | | | |
| Makes systematic planning and monitoring | | | | | | |
| Is persuasive and aware of the importance of networking | | | | | | |
| Is self-confident | | | | | | |
| | 0 | 5 | 10 | 15 | 20 | 25 |

Supporting Material IV
SWOT Analysis

Source: CEFE – International (1998). CEFE-Manual for Trainers.

SWOT Analysis of the business idea

positive factors

negative factors

in the present

Strengths

Weaknesses

Within the control of the entrepreneur

INTERN

- ❖ *Technical expertise*
- ❖ *Good network with customers*
- ❖ *Managerial experience*
- ❖ *Distribution system*
- ❖ *Superior technology*

- ❖ *No control over raw material*
- ❖ *Limited product life*
- ❖ *Poor design of products*
- ❖ *Weak selling efforts*
- ❖ *Comparatively high price*
- ❖ *Lack of working capital*

INTERN

Opportunities

Threats

Beyond the control of the entrepreneur

EXTERN

- ❖ *Few and weak competitors*
- ❖ *Rising income of target market*
- ❖ *Growing demand*
- ❖ *Low interest in loan*
- ❖ *Favourable government policy*

- ❖ *Natural disaster*
- ❖ *Raw materials shortage*
- ❖ *Graft and corruption*
- ❖ *Too much competition*
- ❖ *Poor infrastructure*

EXTERN

in the future

positive factors

negative factors

Selection of the idea regarding the person

| | Idea evaluation | Original idea | Idea No. 2 | Idea No. 3 | ... |
|-----|---|---------------|------------|------------|-----|
| (+) | Is motivating me. | | | | |
| (+) | Reduces the relevance of my weaknesses. | | | | |
| (+) | Based on my strengths. | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| | total | | | | |

| | |
|---------------------------------|-----------|
| <i>I fully agree:</i> | 5 |
| <i>I agree:</i> | 3 |
| <i>I am ambiguous:</i> | 0 |
| <i>I partially don't agree:</i> | -3 |
| <i>I disagree:</i> | -5 |

Selection of the idea regarding the market evaluation

| | Idea evaluation | Original idea | Idea No. 2 | Idea No. 3 | ... |
|-----|-------------------------------------|---------------|------------|------------|-----|
| (+) | Solvent demand | | | | |
| (+) | Availability of qualified personnel | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (+) | ... | | | | |
| (=) | total | | | | |
| (-) | Competitors | | | | |
| (=) | Corrected Total | | | | |
| | total | | | | |

| | |
|-----------------------|----------|
| <i>very high:</i> | <i>5</i> |
| <i>high:</i> | <i>4</i> |
| <i>moderate:</i> | <i>3</i> |
| <i>low:</i> | <i>2</i> |
| <i>imperceptible:</i> | <i>1</i> |
| <i>absent:</i> | <i>0</i> |

| |
|--|
| Competitors: 5 for many competitors, 0 for none deduct from the total so far |
|--|

Supporting Material V
Alternative Business Ideas

Alternative business ideas

The following list contains alternative business ideas for Anna.

Non-cursive lines are Anna's ideas; cursive-lines are ideas collected by other group members.

| | | | |
|----|--|----|----------------------------|
| 1 | Inline-Skater map | 26 | <i>Event organisation</i> |
| 2 | Internet platform for alibis | 27 | <i>Holding speeches</i> |
| 3 | Restaurant reviewer | 28 | <i>Broker</i> |
| 4 | Chocolate shop | 29 | <i>Pilot</i> |
| 5 | Personal Shopping guide for Berlin | 30 | <i>Astronaut</i> |
| 6 | Baking cakes for cafes | 31 | <i>Deep sea researcher</i> |
| 7 | Opening a Starbucks shop | 32 | <i>Travel tester</i> |
| 8 | Trend scout | 33 | <i>Apartment tester</i> |
| 9 | International expert for empirical studies | 34 | <i>Service tester</i> |
| 10 | Tester for running tracks | 35 | Personal trainer |
| 11 | Develop "games" for economic and business lessons | 36 | Stuntwoman |
| 12 | Test driver for cars | 37 | Foreign correspondent |
| 13 | Organising single events | 38 | Detective |
| 14 | Organising Christmas parties | 39 | Race driver |
| 15 | Writing scripts for crime movies | 40 | Fidelity tester |
| 16 | Opening a health-food shop in a small city | 41 | ? |
| 17 | Taxi driver | 42 | ? |
| 18 | Correcting students' seminar papers and degree dissertations | 43 | ? |
| 19 | Designing plastic bags for dog excrements with advertisement | 44 | ? |
| 20 | Friends rental service | 45 | ? |
| 21 | <i>Face-Model</i> | 46 | ? |
| 22 | <i>Journalist</i> | 47 | ? |
| 23 | <i>Running trainer</i> | 48 | ? |
| 24 | <i>Politician</i> | 49 | ? |
| 25 | <i>Travel courier</i> | 50 | ? |

Appendix

„Ball Fabric“



First round

- ❖ the group is forming a circle
- ❖ the ball is given from one participant to the other

First innovation

- ❖ the group is moving closer together
- ❖ the participants gathered the three balls in a box and everybody is touching the box



Documentation

- ❖ evaluation of time and failure rate
- ❖ reflection of the innovation process

Importance of the Programme of Entrepreneurship Training and Motivation for Young Innovative Companies: KTC Case

Assoc. Prof. Dr. Rimantas Venskus

Kaunas University of Technology, Personnel training centre
KTU Regional Science Park, Lihuania, Kaunas K.Petrausko str. 26, www.ktc.lt
Phone: +370 37 333040
Fax: +370 37 333323
Dr. Pranas Milius (P.Milius@ktc.lt), Jurgita Sarkiene (jurgita@ktc.lt)
KTC Case

Keywords:

entrepreneurship training, entrepreneurship motivation, entrepreneurship promotion, innovation development, science and technology park, business incubator.

Abstract

The cumulated experience of knowledge-economy development shows that entrepreneurship training and motivation is a very efficient and perspective organisational form, designed for the development of high-tech industry as well as acceleration of implementation of innovations. Science and technology parks as well as business incubators are considered to be one of organisational forms intended for training small and medium business companies of innovations and entrepreneurship.

This work includes a short description on the history of activity of KTU Regional Science Park as well as the experience of training entrepreneurship in Kaunas Region among novice businessmen. Summaries of currently used programmes of entrepreneurship motivation and training are presented. Additional initiatives that can help to more efficiently organise motivation and training of entrepreneurship as well as processes of entrepreneurship development in the activities of science parks are discussed. This is done with regard to the processes organisation of innovative business, purposeful investment and constant training/learning.

1. Background

Promotion of enterprise is one the principal goals of economical growth, as the main tasks of the development of the country – training of human resources, encouragement of scientific and technological advancement as well as innovations and intellectualisation, expedition of the GDP and reduction of social-economical exclusion among regions. All this can be achieved by being engaged in the intense development of a network of small and medium business (SMB). The development of SMB is inseparable from commercialisation of innovations, cooperation between small and large companies as well as science and business, effective infrastructure of business promotion, which influence economy and scientific development of the entire country.

The primary conditions of the SMB development, as well as enterprise, – knowledge, financial resources and appropriate environment, which would initiate the growth and development of companies. If knowledge is concerned, the emphasis should be put onto the spread of information on business and access of training and consulting services. With the aim to improve the financial muscle of the SMB subjects, an important role should be played by a well-organised and essential financial state support. Improvement of environment – it is primarily improvement of legal and economical environment of the SMB, considering the experience of European countries. Realisation of the three distinguished essential conditions in order to achieve all the mentioned goals, form the essence of the SMB strategic development (12).

Today the development and training of enterprise, or now newly called *entrepreneurship* have become the priority of national innovation policy.

What are the innovations to induce entrepreneurship in the country and are they sufficient? What extra efforts are needed to correctly organise processes of entrepreneurship training? These are relevant questions often raising discussions in the layers of government, academic community and the society, though not always they are given answers.

The purpose of this work – to emphasise conditions and problems of establishment, growth and development of innovative SMB companies, considering the experience of KTU regional science park activity, programmes that are currently being implemented as well as future perspectives; also to discuss programmes to motivate and train entrepreneurship that are practically applied by the science park to innovative companies of Kaunas Region.

1.1. Establishment of Promotion Structures for SMB Companies in Lithuania

The small and medium business (SMB) in Lithuania, EU countries and other countries occupy almost 99 percent of all registered companies. Therefore, special attention from the state and promotion, coming in the norms of competition, have a very solid weigh in expanding and strengthening SMB, which always remains innovation-intensive and easily conforms to market changes.

There exist various promotion structures for SMB in the world. One of them is so called *business incubators* (BI) that have recently spread in a number of countries; they are also called technology/innovation centres (13).

Business incubators in developed countries come to the help for business beginners or start-ups. Business incubators have proved their ability to help solve their problems by reducing the risk of activity and failure of newly-established and growing companies. The concept of business incubators is rather flexible in order to adjust to different requirements and environments. In industrial countries business incubators started operating by promoting new technological companies. A classic business formula starts from the initial capital, however in Lithuania it is blocked at the very beginning of a cycle: the very idea of business establishment or development appears at the dead-point possessing no rooms,

finances, informational background, experienced specialists and consultants, etc. Here comes again business incubator ready to solve these problems. The purpose of a business incubator – help establish scientific innovations as well as promote small and medium business. Here business starters receive rooms, technical and administrative services.

The principal task of a developing country is general promotion of enterprise. As long as the main structure of companies to function is developed, thus the basis is given for high-technology companies.

Incubators, as instruments of promotion of local economy development, have been spreading already for several decades in the entire world. The USA is considered to be the motherland of business incubators. In 1959, having lost their jobs in closed factories, workers started establishing small companies. This kind of business later proved to be very successful – new workplaces were created and occupation of residents was increasing. Business incubators are mediums for scientists' innovations to pass into industry where they are commercialised. Therefore the USA government was encouraging the development of this idea in the entire country. Thus, in 1959 the first business incubator appeared in the USA.

Pioneers of European business incubators, the activity of which is based on the concept of science parks and focuses on the promotion of new technological companies, are Heriot-Watt University in Edinburgh (started its activity in 1969) and Cambridge University. In 1983 the first business incubator of Germany opened its doors in Berlin. In 1986 in Latin America the first project was implemented, after which in 1990, similar projects followed in Eastern and Central Europe after some political changes, which allowed some possibilities for private business. At the same time business incubators started working in Africa. Although there are huge differences among projects taken separately from seven continents, they are united by a common goal – the promotion for start-ups.

Currently there is a great deal of such structures in the entire world: there are around 1,000 of them in Europe. BIs become popular for they provide rooms for companies applying a flexible rent system, enable cooperation or common use of the office or business administration services. Business incubators mediate in order to get financial support to pay for these services.

Mid-1990s is considered to be the coming of BI in Lithuania, when the Innovation Centre of Kaunas University of Technology, led by Dr. P. B. Milius, started upholding the idea and prepared a project of Business incubator.

Considering the fact, that the aim of a business incubator is not to make profit but to offer help to newly established companies, an incubator could be founded only following one law, which regulates the establishment and activity of non-profit-making organisations. To this end, Ministry of Economy of the Republic of Lithuania together with the Lithuanian Development Agency for Small and Medium-Sized Enterprises prepared a model project of regulations for a public institution – Business incubator. What is more, Ministry of Economy, considering the significance of this project to the development of the state economy, became a founder of the first business incubator in Lithuania. Kaunas University of Technology also supported the idea of establishment of such structure, in order scientific innovations were actively applied in production. Thus, on June 11, 1998, after an agreement of establishment had been signed, a public institution 'KTU Regional Business Incubator' was born. Kaunas University of Technology provided the incubator with rooms in the students' town, whereas Ministry of economy assigned more than 2 million Lt. from the Small and Medium-Sized Business Promotion Fund for the reconstruction of the rooms.

Currently Lithuania has 6 business incubators and 42 business information centres. *Business information centres* (BIC) purvey information and consultations for businessmen and the ones willing to start their own business. Staff of business centres provides consultations on establishment of companies, start-up, bookkeeping, and other issues of business management. Besides, business

centres organise seminars, trainings and events on business spread raising relevant topics for businessmen. The majority of BIC services are free of charge or on easy terms.

Business information centres and business incubators are part of the network of institutions for business services – a state established infrastructure for business promotion (picture 1), which would aim at encouragement to establish and develop small and medium-sized companies as well as to secure the access of qualitative business services provided on easy terms for businessmen of all Lithuanian regions.



Picture 1. Network of institutions for business services in Lithuania

The results of activities of business incubators and business information centres in Lithuania show that these structures induce country's economical-innovative development. However, scientific and intellectual resources of the region have a huge influence on the characteristics and results of their activity. The BI in Šiauliai could be assigned to technologically oriented structures of SMB promotion; BIs in other regions are basically concerned with problems of reduction of unemployment rates.

In Lithuania a business promotion infrastructure was established in the period of 1991 – 2004. This period can be called the first stage of establishment of promotion structures for SMB companies (business). We can have no doubt that due to this network of business promotion institutions the problem of information shortage on start-up, management, funding, and development was solved.

2004 is considered to be beginning of the stage II of establishment of business promotion structures, when the first structures of innovation implementation (often called 'high-tech' structures) were established in Lithuania: science and technology parks (STP), innovation centres, technology development agencies, and others (14).

The culture of science and technology parks in Lithuania started developing not long ago, although this practice in the world has existed already for four decades. The fact that cooperation between science and technologies was beneficial was primarily understood by the USA businessmen and scientists and thus the first such park in the world was established in 1951 in Stanford, California State. With the help of USA experience, STP came to Europe and other countries. Such model of business establishment raised today well-known business giants, such as 'Phillips' or 'Nokia'.

The first park in Lithuania was established only in 1993 (Public institution Science and Technology Park in Vilnius). The second wave of establishment of science and technology parks started in 2002. Currently in Lithuania there are 10 science and technology parks (2 are being established), which are closely related with scientific institutions and public organisations, 2 innovation centres, Agency for International Science and Technology Development Programmes in Lithuania (AISTDP) – these are organisations which develop entrepreneurship, induce the expansion of innovation culture among

scientists and businessmen, as well as they are mediums to encourage a closer cooperation between science and business.

Companies that are engaged in performing applied researches as well as in doing other innovative activities are established in science and technology parks (STP). STP offer special value added services, such as business incubation, organisation of trainings, consultations, and transfer of technologies. The principal aim of the regional STPs is to increase regional competitive ability, by inducing culture of quality and innovations among local members, by organising transfer of knowledge and technologies from their initial points to companies and market, also by being active in encouraging establishment of new innovative companies.

Science and technology parks are one of the means to promote scientific researches and experimental development, knowledge and receptive companies; also to commercialise results of researches performed by scientific institutions.

Since we face a fast advancement of technologies, cooperation between businessmen and scientists becomes inevitable. According to experts, such parks in Lithuania have potential not only to induce the development of high-technology sector but also to increase competitive ability of industry and whole economy. Besides, this will keep scientific potential and will improve culture of innovations. Lithuania is not a country of minerals or industrial giants, so it is most beneficial to focus on inducement of information technologies and science. Establishment and development of science and technology parks was planned in a Long-term Strategy for Lithuanian Economic Development until 2015.

Innovation centres – not profit-making organisations, inducing innovative processes in Lithuania: introduction of innovation in business, employment of new technologies and development of innovative business. Innovation centres offer the following services: drawing up business plans and applications for the EU structural funds, with the aim to implement innovative projects of companies; providing consultations on these issues: development of national and EU promotion for innovations and business, management of international projects, activity of companies, management of innovations, and transfer of technologies; search for partners for common projects in business, scientific researches, and others in Lithuania and abroad; organisation of conferences and seminars on innovation development.

The activity of science and technology parks (STP) located in Vilnius, Kaunas, Klaipėda, and Šiauliai shows intensification of inducement of technical, technological and managerial innovations, and the establishment of 'spin-off' firms, which allows hoping for perfection of unfinished scientific-exploratory works (SEW), for the growth of interest from their authors in commercialisation of results, also for **promotion of entrepreneurship between businessmen and scientists as well as for training of entrepreneurship**. At the same time, in order to avoid the possible duplication of STP and BI activities due to insufficient integration of these structures with scientific, training and productive structures, *it is necessary to strengthen the network of promotion for innovations/innovative entrepreneurship*.

Non-financial support for innovations in Lithuania is received from state and public institutions, which form the so called **infrastructure of innovation promotion** that would include the earlier-mentioned innovation centres, science and technology parks, business incubators, business information centres, agencies, and associative business organisations. The majority of these institutions are engaged in implementation of innovation policy by offering special services for innovation promotion. Innovation policy is formed and its implementation administered by Ministry of Economy, which is responsible for innovations in business, and by Ministry of Education and Science, which is responsible for the growth of innovation potential, development of scientific researches and partially for commercialisation of scientific results.

During the second stage of the establishment of structures for business promotion, which continues even today, **training of entrepreneurship takes a special places**. It can be maintained that it is becoming a priority in Lithuania. Investments in education and science are growing rapidly, it is

emphasised that a well-educated society is a guarantee of national stability; a successful economical development determines the growth of life quality.

In order to create nuclei of science, studies and knowledge economy at international level in Lithuania, to accelerate establishment of knowledge society and to strengthen competitive ability of Lithuania the Government approved the concept of expansion of integrated centres (valleys) of science, studies and business in March 2007.

The development of valleys shall be pursued using finances of the 2007-2013 European Union structural promotion, of programmes of development of international scientific researches and innovations, of state and municipal budgets, of participating institutions, and also of private business.

The concept of valley development has been framed as the basic element of reconstruction of infrastructure of Lithuanian innovation system. It shall help to focus, integrate and renew the already existing public potential of scientific researches, to enable a more effective interaction with business and to strengthen its international competitive ability.

Places of concentration of perspective potential of scientific researches shall be identified in order to induce effective work of valleys; territorially scattered scientific and study institutions shall be transferred to valleys, and their concentration would create a value added, optimise their structure and interaction, develop infrastructure, renew the equipment used for scientific researches and studies, set up a modern base of scientific researches, create commercialisation centres, set up 'spin-offs' and knowledge receptive business companies, and raise foreign investments targeted at science.

In the leading world countries a spontaneous establishment of integrated science, study and business centres started in the sixth decade of the last century (famous Silicon Valley in the USA), and later, with the single-minded support from various governments it spread in western Europe, Scandinavia, Japan; currently it is spreading in China, in rising regions of the Far East and the world. The necessity of a closer interaction between science, studies and business is also emphasised in Lithuanian long-term strategic documents.

On October 29, 2007 a commission of integrated science, study and business centres (valleys) as well as a united group of experts of the Science Council of Lithuania and the Lithuanian Academy of Sciences met with the initiators of integrated science, study and business centres (valleys) who presented their view on understanding of the so-called valleys. Visions of five valleys were introduced. Together with the main initiators of business and science valleys – universities, business partners were also present at the presentation of visions. According to business partners, expansion of valleys could essentially contribute to the development of state economy, creation high technologies and commercialisation of science results. Businessmen intend to contribute to the creation of valleys. *These common initiatives of science, studies and business will enable the Lithuanian science and study system to single-mindedly use potential of science and studies, to renew the base of science and studies and to apply science results to business.*

The concept of integrated science, study and business centres (valleys) was approved by the Government this spring, whereas Ministry of Education and Science and Ministry of Economy were obliged to coordinate its implementation. On the basis of successfully functioning valleys not only in the USA, but also in Europe, an assumption is made that the establishment of these new structures – science valleys – in Lithuania shall induce development of innovative business and entrepreneurship training in the country.

There is a sufficient scientific potential in Lithuania, and the country is capable of creating new technologies and products of advanced level. According to the foreign experience, only after the main structure of company functioning has been developed a basis for high-tech establishers is prepared. The principal goal of Lithuania as a developing country is inducement of business development. That is

why Kaunas University of Technology is active in solving a currently very relative problem of development of technologically oriented small business.

Researches carried out among scientific, academic and business promotion institutions showed that the aspects of Lithuanian scientific researches are not always related with business development and demands; the system of science and studies still has a slow reaction towards the needs of state's long-term development, there is a shortage of highly qualified specialists who would meet the demands of modern industry and business; higher schools and scientific research institutions have no interest in creation of new innovative companies due to imperfect laws; there is a big demand for financial resources and skilled workers; economical risk; long term to accept innovations; bureaucratic mechanism of financing innovations; absence of bank warranties for innovations; a shortage of specialised information; the smaller the company is and the bigger the innovation is the harder it is implemented without an external support.

In order to solve the enumerated problems it is essential to unite initiatives of science and technology parks and technological clusters with commercialisation of science results as well as formation of culture of businessmen's innovative entrepreneurship.

1.2. Initiatives and Programmes of Entrepreneurship Promotion in Lithuania

Promotion of entrepreneurship is usually described as an interpretation and popularisation of business processes, as well as a spread of business knowledge in the society by encouraging people to establish private business.

Insufficient level of entrepreneurship in the society is one of the main problems of development of small and medium sized business, covering inability of individuals or their unwillingness to begin private business. Usually the lack of entrepreneurship is influenced by shortage of knowledge and understanding about private business. The problem of shortage of entrepreneurship is felt in the entire European Union and it is named as one of the principal reasons of EU economical backwardness from the USA. Therefore, programmes of entrepreneurship promotion are an extremely popular and valuable initiative, highly appreciable in political and business layers.

What President of European Committee Dimitris Dimitriadis emphasises in the summary of 2006–2008 programme presentation is that in order to overcome future challenges, entrepreneurship should be induced in all layers of the society in all possible forms. Entrepreneurship is perceived in a broad sense; this term means *initiative, which is relevant for both young and older people, and covers economical, scientific and civil activity*. He claims that in the field of economy it is entrepreneurship that performs the main role in order to overcome challenges of globalisation. Entrepreneurship cannot become merely a simple task, for it must acquire a 'human face'. The main goal is to preserve the European social model which is valued in other countries of the world and develop it until it is capable of mastering threats arising due to the world competition and demographic changes.

The level of entrepreneurship in Lithuania was in the process of fast rising up to 2001. Analysing the change of SMB companies during the period of 2002 - 2005 it becomes clear, though marginally, that there was a tendency of decrease of the number of start-ups (in 2001 there were 56,214 companies in the country, in 2002 – 55,252 companies, in 2003 – 54,589, in 2004 – 55,846, and in 2005 – 56,428 companies). According to the data of the Department of Statistics under the Republic of Lithuania on January 1, 2007 there were 59,712 small and medium sized companies in Lithuania (15).

Analysing the structure of operating SMB companies according to the kinds of economical activity of 2003–2006, the following points are noticed: fast growth of the construction sector, size stability of the service sector, and decrease of the industrial and trade sector. The decrease of SMB companies was

caused by the development of large shopping centres and the involved displacement of small enterprises from the market (15).

Gross Domestic Product (GDP) is one of the essential ways of measuring the effectiveness of economical activity of a country or a separate sector of economy. The rates of GDP growth indicate the development of country's economy. Lithuanian economical growth still remains one of the rapidest in Europe – the 7.3% growth in GDP in 2004, 7.6% – in 2005, and 7.5% – in 2006 (15). The biggest influence on such a rapid growth of economy in recent years was felt from bank credits extended on favourable conditions, EU financial support, reduction of taxes and increase of wages, rising income of residents and therefore increased consumption.

The part of SMB in the gross value added in 2004, as compared with 2003, increased by 0.5% and formed 51.6%. The value of products and services created by SMB companies keeps growing every year, which means that the role of SMB in Lithuanian economy is becoming more important (15).

Summarising the statistical data, it could be said that SMB companies constitute the largest and the most dynamic group of companies, which creates 51.6% of the gross value added. Because of this reason inducement of SMB companies is one of the most essential tasks of economy development, the more especially as the principal goals of the state economy development are: to create new work places, to strengthen the middle class, to speed up the growth of GDP, and to diminish social-economical differences among regions. The mentioned above goals cannot be reached unless a network of SMB companies is developed, or a favourable legal, economical and financial climate for business development support is formed.

There has been a concern in recent years about insufficient attention paid to the development of entrepreneurship in Lithuania. Entrepreneurship in the country is reflected by a number of business owners for 1,000 residents of Lithuania which constitutes only 1.2 percent, whereas the average of the European Union (EU) is more than 7 percent. These rates have placed Lithuania in the bottom of all EU members.

Considering recommendations of the European Committee and experts as well as the present situation in the country, new means of promotion of entrepreneurship are currently planned, which will be financed from the state budget and the European Union Structural Funds – they are so called *science valleys, complex programmes, national science programmes, and highly advanced science centres*. The support will be available for lecturers and scientists, who are willing to improve their academic and pedagogical competence, also for the most productive groups of scientists. In order to achieve a better competitive ability of Lithuanian business, there is a need of extra initiatives, which would induce business, especially small and medium; also it is necessary to establish more scientific innovations, try to renew technologies, and make work places more effective (16). According to members of the Confederation of Industrialists, the country must pursue an integral policy when creating a better climate in the society, striving for intellectual nurturance (not only based on entrepreneurship) just by teaching citizens of the country, but also by obviating obstacles for the establishment of new enterprises. The experience of EU training of entrepreneurship as well as formation of abilities purports that at a secondary school around 20 percent of students who participate in the activity of 'small enterprises' establish their own companies after graduation.

Having estimated opinions and recommendations of experts several questions arise: what could intensify efforts single-mindedly in this field alongside with currently applied programmes as well as operating structures that induce entrepreneurship? What are the newest initiatives to induce entrepreneurship which are applied practically?

National Programme of Promotion of Youth Entrepreneurship for 2007-2011 (hereinafter called – Programme) was prepared by implementing the subsection 11.2 of the programme of means of implementation for 2004-2008 of the Republic of Lithuania approved by a decree No. 315 by the

Government of the Republic of Lithuania on March 24, 2005. The relevance of the programme is grounded by legal acts and strategic documents of the European Union. Implementation of the programme will contribute to realisation of our country's principal strategic regulations of development – especially in the field of education, economy, labour market, public services for business, also different regions; upbringing of young generation should receive a lot of attention. Besides, a strategic basis to solve problems of youth entrepreneurship has already been established. Another step that follows is to secure its implementation.

With reference to factual data and the researches made in Lithuania, as well as to recommendations of foreign countries, especially the European Union, and United to Nations Economic Commission for Europe, also to the experience of the USA, Australia and Canada – countries with enormous practice of entrepreneurship promotion for youth, the following three groups of reasons are distinguished:

1. *Insufficient perception and knowledge of youth and the society about possibilities of one's own business;*
2. *A lack of appropriate assistance for youth to start and develop their own business;*
3. *Absence of coordination and supervision of state actions that induce entrepreneurship.*

The emphasis in the programme is put on insufficient training of entrepreneurship in the system of formal and informal education. The training of youth entrepreneurship is perceived as formation and strengthening of entrepreneurship skills through institutions of both formal (university or higher education, vocational training, general education) and informal (labour market vocational training, courses, etc.) education.

Despite all efforts and strategic resolutions, training of entrepreneurship is insufficient. The survey of university graduates has shown that they lack practical skills to start business (as indicated by 53.1 percent of respondents) and to draw up a business plan (40.9 percent). The lifelong learning strategy maintains that comprehensive schools in Lithuania pay too small attention to train entrepreneurship skills. More regard to this skill is paid at vocational and higher education schools – for their syllabi include modules of entrepreneurship.

Researches of Ministry of Economy of the Republic of Lithuania show that representatives of small and medium business do not perceive the lack of entrepreneurship knowledge as one of the principal obstacles of business development. Banks indicate that the potential of crediting small and medium business is used only in half. It is mostly because small businessmen are incapable of drawing up business plans. A long-term strategy for Lithuanian Economic Development until 2015 maintains that, in spite of the fact that the category of economically active residents with university and special secondary education is increasing, a potential of the country's entrepreneurship is not of the right level, and a part of businessmen do not have an appropriate education as well as necessary experience. According to the National Education Strategy the structure and content of education in Lithuania are not adapted to occupation, which is proved by unemployment of youth and other age groups.

Ministry of Education and Science recommends comprehensive schools to have lessons of economy as a compulsory subject in the 9-10 years of study, whereas in the 11-12 – as an elective one. From 1999 through 2003 the number of students of economy in the 9-12 year grew up rapidly – about 6 times. In 2003 the number of schools that had courses of economy was 68 percent from the total number of survey participants, whereas in 2001 – 34 percent. According to the Strategy on Promoting Economic Literacy and Entrepreneurship Education all schools in the European Union have a separate subject on economy and almost in half of them it is compulsory. However, economy and entrepreneurship training is not the same thing, and economy lessons at a comprehensive school have little effect on the rise of entrepreneurship level. Meanwhile in the Lithuanian educational system it is enough just to teach economy.

Training of entrepreneurship at comprehensive schools is developed in accordance with the Strategy on Promoting Economic Literacy and Entrepreneurship Education, where references to prepare methods and means of training entrepreneurship were provided, as well as to raise teachers' qualification. These are just general references though, and no particular means there have been planned.

An appropriate initial assistance for youth to start business and develop it is rather important and related with promotion for small and medium business, for companies established by young people are often small or medium sized, and they have a right to an appropriate support. However, youth also needs specific means since it does not have experience, start-up capital or a business idea. But no adapted means for youth have so far been applied in Lithuania.

A great deal of researches to determine obstacles for a business start and development as well as the quality of assistance have been carried out. A long-term strategy for Lithuanian Economic Development until 2015 maintains that the development of business is impeded by heavy taxes, a lack of financial resources for a start-up capital as well as business itself, insufficiently developed network of promotion institutions, ineffective information and consultation of business, medium competence of businessmen, too strict administrative and legal regulations, also insufficient links among companies, and uneven business development in regions (17).

Today Lithuania has a promotion system of small and medium business, which could be considered an example at coordinating actions of promotion of youth entrepreneurship.

This Lithuanian National Programme of Promotion of Youth Entrepreneurship for 2007-2012 as well as a plan of means received much criticism from experts. Members of the Confederation of Industrialists emphasise the fact that this programme almost ignores the newest EU directives and recommendations issued from 2005 through 2007, which encourage active development of the culture of higher entrepreneurship, creating a favourable academic environment in all levels of education. Also it defies an encouragement to enable organisations with practical experience to contribute to the training of entrepreneurship, to support their efforts in pursuing various programmes, to finance tentative projects at schools, and to spread good practice.

In June 2004 Ministry of Education and Science of the Republic of Lithuania (MES/RL) approved the Strategy on Promoting Economic Literacy and Entrepreneurship Education. It defines the concept of entrepreneurship as a way of thinking, also as personal social, managerial and personal competences which allow one's knowledge to be applied in everyday life, i.e. particular abilities enabling not only organisation of own business, but also take the risks for decisions made (18). The aim of training of entrepreneurship is to train abilities of students. Entrepreneurship in educational system is perceived in a broad sense and it is more highlighted as self-sufficiency, responsibility and innovation in general.

As the strategy maintains, entrepreneurship is one of person's competences which mostly serves for personalisation of a human being, induces self-expression in everyday life. Entrepreneurship operates only in activity. Thus, all the training of personality must be oriented towards a result – to nurture a personality which is able to act independently and responsibly. A secure foundation of a business-oriented viewpoint and entrepreneurship itself should be laid at primary, secondary and higher schools (19).

There are initiatives in Lithuania to prepare modules of knowledge on business and entrepreneurship and include them into syllabi of secondary, higher and university education. This is planned in Lithuanian strategic documents – the long-term strategy for Lithuanian Development and strategic policies of small and medium business development until 2008. Besides, Ministry of Education and Science has implemented several projects related to application of entrepreneurship training into vocational preparation

(finances of PHARE fund) as well as publishing of material on entrepreneurship training (a manual on entrepreneurship basics has been published together with the British Council).

Entrepreneurship of Youth and Strategic Priorities of the Republic of Lithuania:

- To strengthen the training of entrepreneurship of youth and aim at a larger number of people to have conditions to start their own business as it is indicated in the Government programme of 2004-2008 ('Valstybės Žinios', 2004, No. 181-6703).
- Strategic documents of the Republic of Lithuania highlight entrepreneurship as one of the principal factors of a balanced growth of economy and regional development together with knowledge, capital and labour force. This is stated in the vision of Lithuania of a long-term strategy for the country's development, and in the long-term strategy for Lithuanian economic development until 2015.
- In the field of education, the regulations of the state educational strategy for 2003-2012 intend to sharpen attention to the encouragement of entrepreneurship in all levels of education. Besides, it is necessary to train financial wisdom, form skills of entrepreneurship and basics of economic literacy to all schoolchildren and students, as well as to adapt education to the needs of labour market. The strategy of economic literacy and training of entrepreneurship plan adaptation of educational content and training process of comprehensive schools to train entrepreneurship.
- A lifelong learning strategy aims at establishing conditions to train entrepreneurship as one of the main skills in the lifelong learning context in the entire system of education (including the informal one). The activity plan of this strategy focuses on creation and implementation of continuous vocational study programmes, which would concentrate on general abilities (including entrepreneurship), and vocational training and continuous vocational study programmes would evaluate social and economical as well as regional demands.
- In the context of Lithuanian labour market the long-term strategy for the country's development perceives entrepreneurship as a political means of labour market, whereas the strategy of vocational guidance aims at applying the training of entrepreneurship into the system of vocational guidance and consulting.
- As it is planned in the schedule of strategic policies of the country's small and medium sized business development until 2008 it is necessary to create a favourable environment for business (especially legal and economical), to expand and strengthen a set of businessmen, to form a positive image of business in the society, to establish a network of financial and non-financial services, to create some concessions, and to encourage establishment of knowledge-based companies. Strategic policies cover national, regional and local levels. It is extremely important to have an adequate business development in regions, considering peculiarities, demands and possibilities of regions, at the same time preserving particularity of each region. One of the most important strategic policies of the country's small and medium sized business development until 2008 is the training of human resources through the formal and informal education and consulting and extra training system, by providing economical, managerial, financial, accounting, marketing, and legal knowledge and abilities.
- Lithuanian common programming document for 2004-2006 has also distinguished promotion of entrepreneurship as a priority – as training of a skill and as a promotion for business (17).

There are enough programmes, strategies and initiatives of training of entrepreneurship in Lithuania, however, majority of them are not based on practical projects; therefore their efficiency is rather low. There is no a conventional methodology created to measure (evaluate) efficiency that would be acceptable for scientific and business communities.

2. The role of KTU Regional Science Park for entrepreneurship training in Kaunas Region

2.1. Activity and Experience of KTU Regional Park

Public Institution (PI) KTU Regional Science Park (KTC) is a part of the programme of state promotion for small and medium business (SMB), which aims at promoting entrepreneurship in the field of high technologies, at encouragement of technology transfer processes between science and industry, at establishment of favourable environment for business and innovations, at application of scientific and technological achievements for regional development, at development of competitive companies as well as the ones resistant to market changes, and lastly, at incentives to establish new businesses and new work places. *KTC is the first structure of such kind in Lithuania to offer assistance for new business starting subjects.* KTC was established on June 11, 1998. The founders of KTC are Ministry of Economy of the Republic of Lithuania, Kaunas University of Technology and Kaunas County Governor's Administration. On December 11, 2006 the business incubator became KTU Regional Science Park. Currently KTC has 19 employees - 9 of administrative and 10 of auxiliary personnel.

Since 1997, when the idea to establish the first business incubator in Lithuania originated, the TRANSFORM programme of the German Government has greatly contributed to implementation of this project. Until the end of the first quarter of 2000, while the TRANSFORM programme was being in progress of application in Lithuania, Public Institution 'KTU Regional Business Incubator' received around 1 million of DEM as direct investments from this programme, which were later used on training of personnel of the business incubator as well as on interception of experience from German technology centres by servicing technologically-oriented and young, innovative and perspective companies. The finances were also spent on constant consultations and training of German experts in Lithuania as well as on purchasing long-term assets, by equipping a conference hall and administration of the business incubator with furniture and necessary special technical equipment.

The majority of foreign specialists have admitted that the project of 'Establishment of Technology Centre (Business Incubator) in Kaunas' is one of the most successful among international projects according to the TRANSFORM programme.

KTU Regional Science Park, as a promotion form of innovative and technologically-oriented small and medium business (SMB), plays a vital role in promoting economical development of the region, especially in improving conditions of entrepreneurship and the ones of social occupation. It should be mentioned that by rendering appropriate promotion for newly established innovative companies as well as by strengthening them in the process of development, a background for a new universal economical subject to appear is created, which will later produce new items of high value added and create new work places in the region.

Principal aims of the science park: improvement of social-economic conditions of the region by promoting entrepreneurship in the field of high technologies and creating new work places; inducement of application of scientific results in industry; promotion of newly established innovative and technologically-oriented companies; inducement of development of small and medium business in the region.

Infrastructure of KTU Regional Science Park: on December 11, 2006 Public Institution 'KTU Regional Business Incubator', by a resolution of sharers, changed its title into Public Institution KTU Regional Science Park. Judging on the achieved volume of rendered services, their complexity and quality, the business incubator reached the rates that meet the requirements raised for science parks. However, in order to create a universal infrastructure typical for science parks as well as to render services that would meet demands of innovative and technologically and knowledge based business subjects, it was necessary to re-establish the inner structure of the science park.

The present structure of the science park consists of several interconnected subdivisions. The main subdivision of the science park include: a pre-incubator (stage of establishment), a business incubator, a centre of innovations and a science park. Auxiliary infrastructural subdivisions: sponsorship services (financial mediation) and legal services (picture 2).

1. **Pre-incubator:** a structure, where business ideas would be 'incubated' and tested. The main clients of pre-incubators are university postgraduates, scientists and specialists, who do researches in a business sector relevant fields and search for opportunities to start their own business by commercialising the achieved results of researches.

Premises: physically indeterminate premises, intended for generation and implementation of ideas. Moreover, there can be 'virtual' rooms, when specialists work at their usual work/research places, whereas business ideas are generated during the meetings with consultants of the science park.

Pre-incubatory period: 6 months – from the beginning of generation of an idea till the establishment of a juridical business subject.

This initiative of pre-incubator in the science park is at the stage of planning.

2. **Business incubator (business development centre):** a traditionally operating structure, which incubates business starting SMB subjects and offers them all the necessary services needed at the start-up. The purposive group of clients – technologically and innovatively oriented companies, 'spin-outs' and 'spin-offs', SMB subjects that have passed the pre-incubatory period, and other SMB subjects that were registered not earlier than 3 years ago.

Premises: physically indeterminate premises in the buildings in Studentų Street 65 and K.Petrausko Street 26. The total area intended for pre-incubation and business incubation – 40 percent of all the territory leased for companies.

Incubatory period: up to 3 years, if applying an ordinary discount of premise lease, i.e. 75% discount – for the first year of incubation, 50% – for the second year and 25% – for the third year.

3. **Centre of innovations.** Main functions: technological audit, issues of protection of intellectual property, patenting, and monitoring as well as transfer of technologies. Make-up: regular workers of the science park and specialists from universities and industrial companies working under purposive employment contracts. The centre of innovations performs supervision and selection of researches done in university laboratories, institutes and centres, audits these researches technologically, induces commercialisation of the researches as well as establishment of new 'spin-outs'.

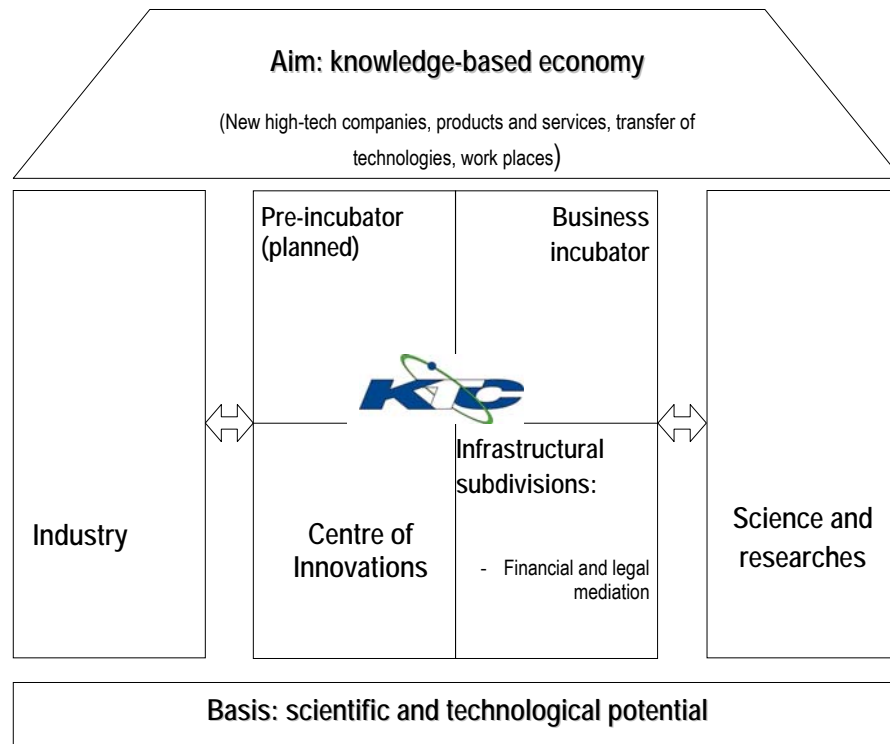
Premises: physically determinate premises in the building in Studentų street 56 and K.Petrausko street 26. *Today KTU Regional Science Park is the only science park that has a centre of innovation in its infrastructure in Lithuania.*

4. **Science park:** a link joining together all the structure. The science park houses high-tech and innovative companies that receive totally favourable environment to develop their own business as well as to create new technologies and apply innovations. The purposive group of clients – companies leaving the business incubator, 'spin-off' and 'spin-out' companies of universities and industrial enterprises, operating in similar fields and, according to their activity profile, capable of forming a cluster. Underlying technological fields – mechatronics and information technologies as well as other industrial fields dominating in Kaunas Region. Companies, which operate in the science park, do not get any discounts on premise lease nor are limitations of premise lease term applied.

Premises: physically indeterminate premises in the buildings in Studentų street 65 and K.Petrausko street 26. The total area intended for the science park – 60 percent of all the territory leased for companies.

Auxiliary-infrastructural subdivisions. They include:

- **Financial mediation and legal services.** They are private business companies that lease premises in the science park and implement their own private goals. Form of cooperation: mutual benefit, i.e. these companies render services for companies of the science park. Companies of financial mediation (venture capital funds) locally find technological enterprises that search for extra financing of the capital and invest in them.



Picture 2. Infrastructure of KTU Regional Science Park

Currently, KTC renders services of business incubation for 68 young innovative and technologically-based companies, which employ about 480 specialists. In the run of eight years close ties were established with Kaunas Region companies and organisations uniting them, thus informing potential purposive groups about services rendered by KTC as well as possibilities of a start of innovative business. KTU Regional Science Park is a member of one of the largest organisations uniting business of Kaunas Region – Kaunas Chamber of Commerce, Industry and Crafts and Association of Kaunas Region Industrialists and Employers. It has some cooperation agreements with Kaunas Labour Exchange, also it cooperates intensively with Kaunas Regional Development Agency (KTC, together with some other municipalities of Kaunas County, is one of the founders of this agency). This determines direct participation in solving businessmen's problems and positively influencing the business environment of Kaunas Region.

One of the main aims of KTU Regional Science Park is to promote entrepreneurship in Kaunas Region. In order to widely spread information on services rendered by the science park as well as established favourable conditions for business, constant cooperation with government institutions of Kaunas Region and associated business structures as well as scientific institutions is kept.

Ministry of Economy of the Republic of Lithuania, Kaunas University of Technology and Kaunas County Governor's Administration are the founders of KTC. The latter founders play a direct role informing the society and young specialists (university postgraduates) about opportunities to implement innovative business ideas in KTC. This comes to close and direct mutual relations and to common and fast solving of problems that arise for businessmen of the region.

The programme of services for innovative business is a constant and continuous process, which KTC has been implementing since the very beginning in 1998. Currently, the science park renders services of business information and business consultation, organises training sessions as well as events on business spread. In order to implement the programme of innovations and competitive ability KTC has rallied up a collective of specialists of various fields, which allows clients to receive efficient services on many issues of innovative business.

KTU Regional Science Park contributes greatly to entrepreneurship promotion by rendering services to businessmen and it is also instrumental in reduction of unemployment as well as occupation problem in Kaunas Region. KTC organises events that help residents to raise their qualification and preparation for the labour market, encourage retraining in order to adjust to the market demands and train entrepreneurship, competitive ability and general abilities of residents of the region in order to adjust to various changes.

To achieve this aim various activities are done: the business day festival is marked annually. During it, KTC companies are awarded for the most substantial contribution to innovations and (or) high technologies in Kaunas Region, for solutions of management of innovative business, etc.

Various training sessions, conferences and other events to improve companies are constantly organised in the park. Participation is free of charge. Presence at specialised training sessions allows businessmen to evaluate their companies from clients' point of view, which makes much easier to decide upon what should be improved and changed in the activity. Heads of small companies get assistance in order to understand that both problems and success of companies are regular. It is a system which can be managed, and most important – this could be learned.

The infrastructure of KTU Regional Science Park as well as the spectrum of rendered services and the purposive group will definitely expand in the nearest future. This year the Government of Lithuania approved of the national concept of KTU high-tech integrated science, studies and business centre (valley); now its project is being drafted.

The aim of this project is to concentrate the potential of scientific researches, studies and knowledge-receptive business in one place, to establish a common use infrastructure for scientific researches and experimental development (SRED) and to single-mindedly pursue SRED of relevant topics for Lithuanian economy.

Science and study institutions, scientific research institutes and business companies will be the founders and partners of the valley. They will aim at establishing a common use infrastructure for SRED in the territory of the valley. Some more institutions will move to the valley as well, including KTU Institute of Physical Electronics, several science laboratories of Kaunas University of Technology and Lithuanian Energy Institute; also a base of studies and science practice will be established there. Science laboratories will be engaged in SRED of relevant topics for Lithuanian economy in the fields of sustainable chemistry, mechatronics, technologies of information communication, and biochemistry.

KTU Regional Science Park takes part in the establishment of the valley. Its activity will cover the development of the valley infrastructure as well as its maintenance and rendering of services for newly established companies. This will secure a more efficient cooperation between science and business; also it will encourage foundation of new companies. The valley will establish conditions for scientists and their groups from other science and study institutions to research in the field of high technologies. Potential of the founders is weighty: every year KTU alone fulfils around 70 percent of all economic

orders that fall on Lithuanian universities, whereas Lithuanian Energy Institute – more than a half of them that fall on all Lithuanian science institutes. Science and study institutions – founders of the valley – pursue projects of the EU 6th Framework programme.

There is an idea (still in negotiation) to establish a Science and Study Promotion Fund for founders of the valley and private business subjects, which will allow to financially support gifted and perspective students and young scientists by enabling them of getting a necessary qualification, doing scientific researches, etc.

Establishment of the valley will enhance the correlations between scientific researches and studies will improve the quality of training of researchers and other specialists, will establish a favourable environment for scientific knowledge and technologies to be transferred to business.

This government-supported initiative proves that the time for Kaunas University of Technology to become a science university has come. In order Lithuanian economy faster eliminated the backwardness from the leading EU countries, the breakthrough tendencies are associated with high technologies. Lithuania finds the following trends of science as priorities: biotechnology, lasers, electronics, nanotechnology and information technologies, as well as mechatronics. In the latter three the most have been done by Kaunas Region. Kaunas academic community consists of eleven universities and higher education schools as well as their subdivisions employing 3,168 lecturers and almost one thousand researchers; there are more than 45 thousand students. Last year, Kaunas people contributed to Lithuanian technological sciences by 58 percent of all scientific production, whereas to the group of biomedicine sciences – almost by 50 percent. Kaunas pursues more than 50 projects of 111 of the EU 6th Framework programme, where specialists of all Lithuanian higher schools take part (33 projects of those 50 are taken by KTU).

Breakthrough tendencies of Kaunas Region: creation of new materials and synthesis, mechatronics, chemical industry, information and communication technologies, hydrogen energetics, micro and nanotechnologies, biomedicine, and biomechanics. The most often heard reasons why companies make so little investments in scientific researches and innovations are the following: imperfect mechanisms of inducement of business investments in science and technology parks; trends of Lithuanian scientific researches are not always related to business development and its demands; the system of science and studies shows vague reaction to the demands of the state's long-term development, there is a lack of highly qualified specialists who would meet the requirements of modern industry and business; higher education schools and institutions of scientific researches are not interested in establishing new innovative companies due to imperfect laws; a huge demand of financial resources and skilled employees as well as economical risk; long term to accept innovations; bureaucratic mechanism of financing innovations; absence of bank warranties for innovations; a shortage of specialised information; the smaller the company is and the bigger the innovation is the harder it is implemented without an external support.

Considering the above mentioned, this initiative aims at establishing a national integrated Kaunas science, studies and business centre (valley) by uniting efforts and focusing human and financial resources. The valley would concentrate high-tech scientific researches done by science and study institutions of the region, would orient them towards demands of the national business, and would encourage to apply high technologies in the business of Kaunas Region. Initiators expect this centre (valley) to unite all initiatives of Kaunas science and study institutions as well as the ones that promote science and business interaction into an undivided nucleus of knowledge economy and to develop it to an international level.

2.2 KTC Entrepreneurship Training and Motivation Programme (case description)

In order to start business it is not enough to have a great business idea and a wish to implement it as fast as possible. Business start is a complex and complicated process that consists of several stages: grounding of a business idea (it is a determination of a niche and product (service) to fulfil that niche), evaluation of a businessman's personal features as well as conditions of business organisation, selection of a company's juridical form, preparation of a business organisation project, preparation of documents to establish a company, and registration of a company. One of the principal indicators to start business is the exploration of a business environment. Possessing the information on business environment and its influencing factors we can better foresee possibilities of establishment of new business and the competitive ability of operating companies. It is proved practically that there are three important factors determining a successful activity of a company: advantages of a new idea, skills of a businessman and financial potential (15).

Success in small business depends greatly on abilities of a businessman, his attitudes (mentality), business motivations, and personal features. As practice shows, small and medium companies often fold up because of businessman's inability to manage them. There are many characteristics necessary for a boss in a small company but the prevailing one is a talent of undertaker, which could be described as a sense not to consider for a long time but to make fast decisions (often with reference not to thorough analysis of the situation, but to intuition and experience). It is also necessary know how to convey the thoughts, give orders and control their execution.

An essential feature of SMB – constant change. Since business environment constantly changes, companies, willing to keep and continue their activities, have to be flexible, dynamic and open. Only an adequate reaction to environmental changes and forethought of them can guarantee the continuation of company's existence. This has become especially relevant in modern times, when the supply of goods and services is rather big, and quality requirements by consumers are constantly rising. Thus, the basis of growth, profitability, and continuation of business is the ability to supply the market with new products and services, at the same time reducing expenditure on production and administration and searching for new markets (15). So, application of innovations to companies becomes one of the factors determining success.

What actually is innovative activity? It is an often case of SMB representatives to perceive innovative activity only in its narrow sense – as application of new technologies and manufacturing of new products. Therefore, in modern business innovative activity is recognised much broader – *it is not merely application of new technologies and manufacturing of new products, but also innovations in management, education and design, as well as spread of information technologies.* Application of innovations in business not only gives companies the advantage over competitors, but also guarantees a long-lasting existence of the company in market economy. Innovative activity in SMB companies is often oriented towards the search and employment of possibilities. This means that with the aim to meet requirements of a consumer businessmen do not necessarily create or introduce something radically new, but also search for innovatory ideas to improve the usual activity of a company.

Company heads in modern society must be capable of combining economical and public goals. This requires developing creativity, deepening knowledge and improving skills. Practically, people with higher education are better at this. Businessmen having more knowledge appear to be more flexible, stronger emotionally in critical situations and are able to better employ their intellectual abilities to solve various problems.

Since competition in the market is rising, businessmen are forced to look for other, smarter ways to survive and offer a consumer a necessary product or service, by using material and human resources

very effectively. In order to secure a successful business, a businessman must deepen his knowledge, constantly learn from what is the best and most modern in the world.

A learning businessman discovers new ways how to treat traditional things more qualitatively and efficiently, employing competence, skills and knowledge of his employees at maximum. Various courses, both for beginners and experienced businessmen, organised by institutions and organisations contribute to achieving new knowledge and deepening the present one.

In the recent four years the science park has been focusing much on education of human resources on the topic of entrepreneurship. It is constantly monitored what kind of entrepreneurship knowledge or skills is mostly needed in the activity of companies, how their training could contribute to the competitive ability and development of companies, also it is sought to analyse what kind of entrepreneurship knowledge or skills is mostly lacked by different speciality students (graduates and postgraduates) as well as how university lecturers assess demands and opportunities of entrepreneurship training of students.

Considering a different need of training among those willing to start their own business and the ones already having it, training sessions in the science park have been divided into two groups – a programme of entrepreneurship training has been established (picture 3). This programme consists of two separate parts: motivation of innovatory entrepreneurship and training of innovatory entrepreneurship.

KTC actions/activities promoting entrepreneurship in Kaunas Region:

- Traditional assistance for young innovative companies:
 - Lease of administrative/office premises in KTC under favourable conditions; various services;
 - Consultations on issues of business start;
 - Forms of financial promotion for business starters;
 - Assistance in preparation for and participation in national and international exhibitions.
- Entrepreneurship training programme:
 - Programme of motivation of innovatory entrepreneurship;
 - Programme of training of innovatory entrepreneurship.
- Participation in activities of international and national networks including initiatives of technological platforms and clusters;
- Partnership and implementation of international and national projects

Picture 3. KTC actions/activities promoting entrepreneurship in Kaunas Region.

The first training cycle is more oriented towards demands of knowledge on entrepreneurship of potential businessmen (baccalaureates and postgraduates). The purposive group of the second training cycle of entrepreneurship programme – heads and managers of young companies as well as all others who are thinking of establishing their own business. The aim of this training programme is *to encourage young companies to be more active, take risks, base their activities on innovations, apply the newest and most advanced technologies, help find and exhibit the strongest personal characteristics, and thus contribute to entrepreneurship promoting in Kaunas Region.*

KTU Regional Science Park has been organising training session for business starters since 1999. An idea to create a systematic, purposeful and regular training programme emerged in 2004, after the need of such trainings had been noticed. Every year the entrepreneurship training programme is improved, renewed and offered to visitors using contemporary innovative training methods. This programme was created by the administrative staff of the science park (director and liable managers) together with research workers and lecturers of Kaunas University of Technology (KTU). Individual seminars of the training programme are conducted by KTC staff, though the majority of training sessions are conducted by KTU lecturers who possess necessary experience and who always deepen their knowledge in a certain field. Big and professional businessmen, the so-called '*senior entrepreneurs*', are now and then invited to share their experience. Handover of practical experience of '*senior entrepreneurs*' – the fastest and most efficient way to promote entrepreneurship and business.

The programme of motivation of innovatory entrepreneurship (see table 1) induces not only establishment of commercial entrepreneurship, but also personal activeness in trying to become self-contained by employing all opportunities and setting up the environment according to personal vision. It is a programme, which supplements a personal 'competence portfolio' with lacking knowledge and encourages visitors of the training sessions to change the status quo by themselves. Many people have different thoughts and activity ideas, though they are incapable of identifying activity priorities. **The aim of the cycle of these motivation trainings – to help understand what kind of activity would motivate and promote entrepreneurship, i.e. train skills, assist in finding different possibilities, raise motivation as well as attitudes of a young man, and introduce the available promotion in the process of establishing and developing business.**

| <i>Criteria</i> | <i>Description</i> |
|------------------------|--|
| Course Nb. and hours | 6 courses, 48 academic hours. |
| Entrance criteria | - |
| Programme structure | 1. Peculiarities of Innovatory Entrepreneurship; 2. Think Creatively. Techniques of Creative Thinking; 3. Entrepreneurship and Dynamism of Environment; 4. Entrepreneurship and Leadership; 5. SMB Promotion System and Possibilities; 6. Handover of Practical Experience of Senior Entrepreneurs. |
| Course time schedule | Once a week/ 6-8 hours. |
| Number of participants | 8-12 (max 15) participants. |

Table 1. The programme of motivation of innovatory entrepreneurship in KTC.

The programme of training of innovatory entrepreneurship (see table 2) provides theoretical and practical knowledge on marketing, financial recruitment, management of new and just-starting companies, and training of the culture of organisation and creativity of personnel as well as development of business based on scientific researches and experiments.

| <i>Criteria</i> | <i>Description</i> |
|---------------------------|---|
| Course Nb. and hours | 10 courses, 80 academic hours. |
| Entrance criteria | - |
| Programme structure | 1. Entrepreneurship and Innovation. Intrapreneurship; 2. Innovation and Knowledge Management. Innovation Policy. Technology transfer between science and business enterprises; 3. Business Planning and Development. Technology Strategy Methodology and Business; 4. Marketing Strategies. Business Internationalisation; 5. Project Management; 6. Financing Possibilities of Innovative Business; 7. Human Resource Management. Motivation. Leadership; 8. Organisational Culture and Management; 9. Intellectual Property Rights. Licensing; 10. Senior Entrepreneurs' Stories of Success and Practical Advice ('How to Become Successful'). |
| Course type/ used methods | Courses are based on group/team work, active training methods, video material, and discussions. |
| Course time schedule | Once a week/ 6-8 hours. |
| Number of participants | 8-12 (max 15) participants. |

Table 2. The programme of training of innovatory entrepreneurship in KTC.

The programme is based on the concept that knowledge should be gained not only in a seminar, but also communicating directly with experienced businessmen, participating in practical trainings of nurturing businessman's personality and character, analysing practical situations, modelling business, and working in teams.

Besides, the programme contributes greatly to the improvement of quality of business plans from the growing number of projects from different sources (business angel networks, venture capital funds, programmes of municipalities and business promotion agencies). Business plans, prepared in the process of trainings, can be implemented in the KTU Regional Science Park.

In order to create the programme of training of innovatory entrepreneurship international experience in the fields of entrepreneurship training and promoting was taken as the basis, which is believed to have greatly influenced the demand and efficiency of entrepreneurship trainings, as compared with analogous entrepreneurship training and promoting programmes, currently existing in the market.

This training programme contributes to the development of knowledge-based business, establishment of new companies (especially in the priority fields of high technologies), their internationalisation, creation and commercialisation of new products, and strengthening of links between science and business.

3. Current challenges/ problems facing the organization and educational effort

In pursuance of the policy of the rapid development of integrated economy it is vital to create a favourable climate for entrepreneurship training in the society, aiming at a change of mindset as well as at improvement of skills and elimination of obstacles of establishment and development of new companies. Considering this, next to the discussed and pending problems of regulation, taxes and finances, it is advised to create and apply horizontal means for the establishment of promotion basis of the entrepreneurship policy.

In order to more efficiently organise processes of entrepreneurship motivation and training as well as its development in the activities of science parks it is important to consider and evaluate properly such processes like organisation of innovative business, purposeful investment and constant training.

Innovations and entrepreneurship are not always interconnected. Due to insufficiently close cooperation among scientific research institutions, universities and businessmen in the fields of researches and creation of new products and technologies for the market, businessmen do not always find innovations attractive. Usually the fields of scientific researches pass business demands and a lack of results suitable for commercialisation is felt. Therefore, one of the most important tasks in this field is to train entrepreneurship not merely among companies that apply innovation practically, but also among scientists and researchers. This would significantly increase the relevance of scientific researches towards business, would encourage researchers and scientist to be more active while implementing tasks of technological development, and choosing research subjects, international experience and databases would be employed.

Entrepreneurship training and investments in innovations are essential not only for high-tech companies, but also in branches of traditional industry and service sector. An innovatory attitude towards business management and a constant application of innovations contribute to improve labour productivity, efficiency, quality, and at the same time – international competitive ability of a company.

Considering the low level of innovative activity of the country's business companies, it is essential to intensively stimulate creative innovative activity, i.e. intensify cooperation between business and scientific research institutions, induce the development of researches done by companies and support the establishment of technical facilities necessary for this kind of activity.

It should be mentioned that there are cases when heads of Lithuanian companies do not know that they have some problems, which impede the development of a successful business, therefore it is important to help find them. Entrepreneurship trainings, organised by institutions of the network of public services to business, are often very helpful in solving problems of the lack of knowledge or skills. Thus, accessibility of public services to business, its content and quality, conformity with demands of business companies and business starters, is an important factor to raise the level of entrepreneurship.

A lot of national and regional means are often initiated on the basis of priorities stated in EU or national programmes. When implementation period of these programmes is over and new ones appear, the further pursuance of these initiatives is usually intermitted. Therefore, consultation services and training cycles are often unfinished. As a result, when forming entrepreneurship training programmes, it is essential to project their continuation after financial resources end up.

Application of innovations to business is basically done as adaptation of necessary technologies, but not as creation of original knowledge or application of somewhere else created innovations. Only the national and European long-term promotion can be helpful in creating and applying strategically advanced innovations practically.

The Lithuanian system of means of financial promotion for SMB is not fully developed. Credit institutions are not very active in granting micro-credits for business starting companies, there is a

passive activity of venture capital funds in the field of sponsorship of projects created by young innovative companies. Innovations are always related with big risk, therefore, due to the over-risky projects, banks often refuse to finance them. In foreign countries informal individual investors – ‘business angels’ – come to help. They are ready to invest their capital in risky businesses just appealing to their experience and interests. In Lithuania the real ‘business angels’ still do not exist, because there are not many people who freely hold the sums bigger than 100,000 euros, thus, only unification of ‘business angels’ can be discussed. Notably, the demands of modern business are bigger than business patrons can offer.

Businessmen need to be prepared for management of investments, since the expenditures, necessary for doing innovative activity, are planned easily, but the income – is not. Many businessmen lack financial resources to order investment projects at experienced companies, thus, trainings that focus on practical preparation are relevant and necessary. Such training sessions allow businessmen to prepare investment projects on their own with the help of consultants.

It is not a rare case when university graduates become initiators of an innovative business. The data of various researches indicate that graduates of American universities already know how to start their own business; however, the ones from the EU (including Lithuania) lack the knowledge. While studying they do not get practical knowledge, because business and technology studies are often unrelated to practice. Therefore, universities should aim at making entrepreneurship an important part of their syllabi, for combining entrepreneurship-based attitude and abilities acquired in science and technical studies, students and researchers will have an opportunity to better commercialise their own ideas as well as developed new technologies (21).

Systematic entrepreneurship training in university and college studies is also integrated into programmes of technical disciplines. This establishes better conditions for ‘spin-offs’ and innovatory companies to appear and helps scientific researchers gain entrepreneurship skills.

‘Spin-offs’ – companies that were established on the basis of researches done by higher education schools – are more often emphasised as a means of strengthening the development of local economy. However, their rates of establishment and development are very dependent on scientists’ entrepreneurship abilities. Due to some inner barriers, like a system of career, which is built on academic achievements, the entrepreneurship of the latter at universities is not appreciated positively. It is very important to have the necessary number of lecturers to teach entrepreneurship training disciplines, to secure their qualification and intensify their international exchanges. Currently, innovatory training methods of entrepreneurship are applied and constantly developed in the EU, also their practical effect is analysed, therefore, active international interchange of this practice is available.

Having evaluated Lithuanian scientific potential, it can be stated that only a minor part of modern technologies, which are necessary for Lithuanian companies, can be created in Lithuania. This means that *Lithuanian companies will have to purchase the vast majority of modern and competitive technologies in other countries*. The rise of such tendencies has already been noticed. To purchase foreign technologies and apply them in our companies is a more complex task than to do the same with local technologies. Often such a task is too complicated for Lithuanian small and medium sized companies, which lack experience in international cooperation, transfer of intellectual property and application of technologies. Here, the role of science parks and centres of innovations is very significant, as are their international contacts and assistance for firms when applying for BP-7, COST, Eureka, and other EU programmes.

4. Conclusions

One of the principal aims of the policy of small and medium sized business development of the Government of the Republic of Lithuania – to establish favourable conditions for new companies to appear, to increase the rates of successfully working companies as well as their competitive abilities. This requires government institutions to constantly observe and consider dynamically changing situations of business companies, to review, improve and/or foresee new means of promotion, development and inducement as well as long-term programmes for the further development of entrepreneurship in the country.

The government, implementing the programme of small and medium sized business development, needs to *cooperate*, i.e. be in a continuous relation with heads of companies and consider businessmen's opinion on the contemporary business environment in the country, to *evaluate present and rising problems and impediments/obstacles of business development*, and on their basis to *set actions in the direction of making the applied means more efficient*. Due to such a constant contact between government institutions and business representatives, the level of entrepreneurship in the country would much higher, because, considering positions of the Government and businessmen, it is noted that they have different approaches on the same economical phenomena.

An entrepreneurship training system has been established and is practically applied in all levels, from school to university. It has been conceived that schoolchildren should get information on business opportunities from the early age. They should be taught of it as a possible future occupation. Moreover, the main skills of entrepreneurship and creativity must be trained, as well as self-confidence in any activity. Universities must include principles of entrepreneurship into study plans as an important part of training programmes and encourage or even demand students to choose the courses of entrepreneurship training (19). This initiative is a part of Lisbon strategy for growth and jobs.

Entrepreneurship – a person's ability to implement ideas, take the initiative, be responsible, take the risks, and pursue set tasks. In Lithuania both young and older people gradually find favourable conditions and opportunities to improve their abilities and skills in the field of entrepreneurship. There is a network of institutions to serve business (BI, BIC), structures of innovative business promotion (STP, IC, AISTDP) and other advantageous initiatives are being established, such as science valleys or technological platforms and clusters, which will intensify cooperation between science and business in our country.

The principal reasons due to which means of entrepreneurship training are slowly developed:

- Uneven technological and managerial level of big business objects and small business subjects;
- Not many examples of successful cooperation in international networks, which would promote entrepreneurship training;
- Abundance of strategies and programmes does not allow the authorities to appropriately focus on the common formation of the policy of entrepreneurship training and application of innovations.

Insufficient level of entrepreneurship in the society is one of the main problems of development of small and medium sized business. It should be solved by pursuing the state's integrated policy, covering *the promotion of entrepreneurship-based attitude by coherent training and teaching of the residents* as well as *the elimination of obstacles of business establishment and development*. Entrepreneurship training increases possibilities of the establishment of new companies and their self-contained activity.

References

1. Sundar Bharadwai and Anil Menon *Making Innovation Happen in Organisations: Individual Creativity Mechanisms, Organizational Creativity Mechanisms or Both?*, Journal of Product Innovation Management, 2002, 17, pp. 424-434
2. Christian van Dijk and Jan van den Ende, *Suggestion Systems: Transferring Employee Creativity Into Practicable Ideas*, R&D Management 32(5), 2002, pp. 387-395
3. Kyro P. And Carrier C. *The Dynamics of Learning Entrepreneurship in a Cross-Cultural University Context*, University of Tampere Faculty of Education Research Centre for Vocational and Professional Education, 2005, ISBN 951-44-6379-X, ISSN 1459-8191
4. Hougaard S. *The Business Idea: The Early Stages of Entrepreneurship*, Springer Berlin Heidelberg New York, 2005, ISBN 3-540-22663-X
5. Blenker P., Dreisler P., and Kjeldsen J. *Entrepreneurship Education – the New Challenge Facing the Universities – A framework for understanding and development of entrepreneurial university communities*, Aarhus School of Business and University of Aarhus, Denmark, Department of Management, 2006, Working Paper 2006-02
6. Broekstra M., Karnebek A.J. and P.C. van der Sijde *Towards a Quality Management System/Improving the Quality of University Spin-off Programmes*, Twente University Press, 2002, ISBN 9036517842
7. P.C. van der Sijde, Wirsing B., Cuyvers R. And Ridder A. *New Concepts for Academic Entrepreneurship*, Twente University Press, 2002, ISBN 903651830x
8. Lumsdaine E. *Entrepreneurship from Creativity to Innovation: Effective Thinking Skills for a Changing World*, 2006
9. Yin Cheong Cheng, *Development of Multiple Thinking and Creativity in Organisational Learning*, International Journal of Educational Management; Volume 19, Issue: 7, 2005, Research paper
10. Horng, Jeou-Shyan; Hong, Jon-Chao; ChanLin, Lih-Juan; Chang, Shih-Hui; Chu, Hui-Chuan, *Creative Teachers and Creative Teaching Strategies*, International Journal of Consumer Studies, Jul 2005, Vol. 29 Issue 4, pp. 352-358, 7p.
11. E.C. Martins, F. Terblanche, *Building Organisational Culture That Stimulates Creativity and Innovation*, European Journal of Innovation Management, Volume 6, Number 1, 2003, pp. 64-74
12. Act No. 1119 of the Lithuanian Government, September 19, 2000. *On the approval of strategic policies of small and medium sized business development until 2003 and means of small and medium sized business development in 2000-2001*. 'Valstybės Žinios', 2000, No. 81-2448
13. Milius P.B. and others. *Management of Business Incubators*, KTU centre of innovations, Kaunas, 'Technologija', 2001, ISBN 9986-13-966-X, p.126
14. Milius P.B., Miliūtė A., *Survey of Improving the Management of Science and Technology Parks*, 'Inžinerijos Ekonomika', ISSN 1392-2785, 2005, Nr.2 (42), pp. 83-89
15. Success Factors of Small and Medium-Sized Business Companies 2006, Department of Statistics to the Government of the Republic of Lithuania, Vilnius 2007
16. The research was being carried out from December 2006 through January 2007 implementing a project financed from the European Social Fund called 'Entrepreneurship Training in the Fields of Social and Engineering Sciences at Mykolas Romeris University, Kaunas University of Technology and Vilnius Gediminas Technical University' in conformity with the medium 2.5 'Improvement of the Quality of Human Resources in the Field of Scientific Researches and Innovations' of the 2 priority

'Development of Human Resources' of the Lithuanian Single Programming Document of 2004-2006.

17. National Programme (Project) for Promotion of Youth Entrepreneurship in 2007-2011.
18. Strategy of Economic Literacy and Entrepreneurship Education, approved by a decree No. ISAK-835, p.2 of Minister of Education and Science of the Republic of Lithuania on April 2, 2004.
19. Account of the European Economic and Social Committee on the Commission's communiqué for the Council, European Parliament, European Economic and Social Committee, and Regional Committee Implementing the Lisbon Programme of the Community: Nurturance of Entrepreneurship-based attitude by Training and Teaching, COM (2006) 33 final, (2006/C 309/23) http://eurlex.europa.eu/LexUriServ/site/lt/oj/2006/c_309/c_309200612161t01100114.pdf
20. IP/06/148 Brussels, February 13, 2006 Plan of the European Commission to Train Skills of Entrepreneurship at Schools and Universities. http://europa.eu.int/comm/education/policies/2010/objectives_en.html#basic
21. <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006AE0971:LT:HTML>, Account of the European Economic and Social Committee on the Commission's communiqué for the Council, European Parliament, European Economic and Social Committee, and Regional Committee Implementing the Lisbon Programme of the Community: Nurturance of Entrepreneurship-based attitude by Training and Teaching, COM (2006) 33 final , *Official Publication C 309* , 16.12.2006 pp. 0110 – 0114
22. Commission's communiqué for the Council, European Parliament, European Economic and Social Committee, and Regional Committee/Brussels, 13.2.2006 /COM (2006) 33 final / European Commission
23. Kriščiūnas K., Daugėlienė R. *Towards Knowledge-Based Economy: Expression and Penetration of Knowledge*, II Monograph, Kaunas, 'Technologija', 2006, 225 p., ISBN 9955-25-058-5
24. *Science, Technology and Society*, Monograph, Kaunas, 'Technologija', 2002, 241-271 p., ISBN 9955-09-179-7
25. Žukauskas R.S. *Strategic Policies of Small and Medium Sized Business Development*, 'Viešoji Politika ir Administravimas', 2002 Nr.1, ISSN 1648-2603, 1p.
26. Personal Opinion: Virginija Būdienė, Vice-minister of the Ministry of Education and Science, Chairwoman of a commission of integrated science, study and business centres (valleys), 2007

How to Take Off?

The OURCHIP Company

Jacek Klich (Ph.D.)

Jerzy Rosiński (Ph. D.)

Institute of Economics and Business Management (Jagiellonian University), CITTRU
Poland, 31-387 Krakow, Gronostajowa 3
Fax: +48 12 664 69 14
Jacek Klich: uuklich@cyf-kr.edu.pl
Jerzy Rosiński: jerzy.rosinski@uj.edu.pl

Keywords:

hi-tech companies; IT companies; financing IT companies;

Abstract

The case introduces the post-start-up stage and dilemmas pertaining to this stage of development of an innovative, high-tech company in a southern region of Poland.

It argues that institutions for promoting entrepreneurship in the region failed to provide the entrepreneur with adequate assistance.

This case shows that the access to financing and to highly educated programmers is of prime importance to newly created companies operating in IT sector. Furthermore, the case underlines the necessity of harmoniously orchestrating the activities at the meeting point of “triple helix” elements, i.e. universities, local governments and businesses.

1. Background

Adam was born in Poland. He has spent most of his life in the USA where his parents emigrated in the second half of the 1980s. He finished college there, graduated from the prestigious Massachusetts Institute of Technology in Boston. He is now an engineer specialising in designing integrated circuits.

Willing to discover his country of origin and his parents' homeland, Adam decided to come to Krakow and take up post-graduate studies at the Jagiellonian University. In 2005 he completed a two-year course in European Studies for Foreigners, in the English language. One of the modules was on the subject of entrepreneurship and business management in post-communist countries, offering information on opportunities awaiting foreign investors in these countries, and on the rules of private entrepreneurship in Poland.

Upon completion of the studies, taking advantage of the opportunities he had identified for himself on the Polish market, and particularly in Krakow, Adam seriously contemplated starting a business in Krakow. After analyzing his personal resources- fluency in English, double citizenship (Polish and American), expert knowledge of computer programmes and integrated circuits - and, most importantly, armed with an idea for a business, he took steps to register his new company and start up a business.

2. Setting the stage

During his two years in Krakow Adam became acquainted with the city's milieu, deliberating (with varying degrees of intensity and determination) over starting up his own business.

He resolved to set up his business in Krakow and to focus on comprehensive software design and software applications (Appendix: Business Opportunities in Malopolska voivodship).

He recognized the fact that Krakow had key resources for his future company (highly qualified programmers), and there was a market (with excellent prospects) for such services.

In February 2006 (having considered various options and consulted lawyers in Poland and in the USA) Adam registered OurChip, a limited liability company with a capital of 46,000 PLN. The planned strategy of the company determined its organisational form. Namely, over the long-term, Adam's company was to operate globally, cooperating with large enterprises in the IT and Electronics sectors. However, he first needed to establish a bridgehead on the Polish market (which he perceived as upwardly dynamic and sizeable enough for the first stage of the company's development). Once he secures a position on the Polish market and in other post-communist countries of Central and Eastern Europe, the company will expand overseas, primarily in the direction of the USA market, about which Adam was very knowledgeable.

Initially Adam considered setting up his company in the USA, but he soon abandoned the idea, being afraid that a small, unknown company registered in the USA will have more difficulties breaking through in the local and national market. Registration of the company in Poland would generate more trust among potential partners, who could attest to the company's credibility with the National Court Register. Registration of the company in February 2006 did not amount to starting up a business. At that point Adam embarked on recruiting programmers for his team. As it turned out, the task ran counter to the earlier assumption of an easy accessibility of highly qualified programmers.

What Adam previously considered as a favourable factor (Motorola opening its programming centre in the special economic zone, thus expanding the market for his company's services) turned out only to create competition for resources - highly qualified programmers. On entering the Krakow market, Motorola scooped up 200 programmers. The aura of a global corporation, and the tried and tested procedures of recruitment led to a prompt and successful completion of the teams, draining the local market of programmers.

The situation was further exacerbated by the wave of migration of the young generation of Poles to the old UE countries (following Poland's accession to the UE on 1st May 2004).

Besides standard recruitment procedures (announcements in press and on the Internet), Adam established contact with the head of one of the AGH (University of Science and Technology) departments specializing in programming, and found a group of students of the final year.

After 6 months of these (and other) endeavours, Adam succeeded in securing a team of five programmers.

Along with his 'quest' to complete the team (other than the recruitment process itself), Adam came up against a series of problems, such as, e.g.:

- **Working agreements with the specialists.** Initially Adam did not want to employ the specialists under standard National Labour Law regulations as, according to the Polish labour code, employees are granted with special entitlements that burden the employer (social and health insurance, flexi-time, days off and mandatory holidays, etc.) and curtail the employer's rights with regard to dissolving the said agreement. He wanted the workers to work under contracts, which would specify duties of every worker and the remuneration based on assignments. According to Polish Law this is feasible if the programmers register their own business and operate as sole proprietorship entities subcontracted by OurChip. However, as the employees were not interested in self-employment, Adam had to abandon the idea of cooperation based on contracting and started preparing suitable work agreements which would stipulate remuneration based on task achievement. This, however entailed yet another problem.
- **Motivating workers.** As the company did not sell services at this stage (vide Appendix 1), it was too early assess the market success (sales) of the work input (programmes under construction). Adam had to persuade the workers that their work and commitment in the company over the first months (or even years) of the company's operation had to be perceived in the categories of an investment. This argumentation sounded plausible as the programmers (specialists) did appreciate the value of the product their company was to offer (vide Appendix 2)
- **Confidentiality of data.** Another important issue to be considered when drawing up work agreements pertained to intellectual property of the solutions created by the company, and confidentiality of the circulation of the information (both internal and external). Much as these issues (and others, not mentioned here) were of importance and had to be included in the working agreements, Adam did not decide to employ the services of a firm specializing in drawing up appropriate documentation. He only solicited informal advice from his acquaintances, an economist and a lawyer among them.

3. Current challenges facing the organization

Originally, the company was to focus on all types of work relating to software and software applications. Adam did not define the type of software product of the company, nor the sectors of economy (e.g. software for banks, insurance companies, hospitals) nor corporate entities (small or large enterprises) that the product offer would be addressed to. Adam admitted that his idea for business was not accurately defined and he relied on his own (and his employees') flexibility and creativity, rather than on a thorough analysis of specific sectors.

The first product to be launched was *System On Chip (SoC)* – an alternative to wireless telecommunication. The product was still in the process of construction and its specifications subject to previews.

The failure to clearly define the target group resulted in, among others, low effectiveness in hunting for orders. The running costs incurred in the company's operation's (vide Appendix no. 2) made Adam revise the strategy and orientation of the company, shifting from software design to a unique form of technology designing electronic components.

4. Breakthrough technology and product

OurChip Company is in possession of highly innovative technology for designing integrated circuits. By designing the advanced integrated circuits OurChip has worked out a unique designing programme originating from the traditional VLSI method, yet unprecedented in the electronics. The technology may be an asset if the company launches the products based on plastic (as an alternative to electronics using silicon), which is bound to take the market by storm and become the product leader in the years to come.

Adam's expertise in the field can help the design of microchips on nanomaterial board, and in consequence, to provide end users with a product that could not have been conceived using standard technology. At this stage the company does not have a prototype of the microprocessor. However the product – a microcontroller on nanomaterial board - may be ready within 2-3 months.

Advantages and disadvantages of the future product

Advantages

- flexible (pliable);
- light (small weight);
- thin (thin circuit construction);
- aesthetic;
- more environment-friendly than the circuits manufactured on silicon base;
- low costs of production of the integrated circuits adapted to the needs of specific customers (custom design).

Disadvantages

- short durability (8-18 months, depending on the materials used);
- lower efficiency, in certain respects, as compared with silicon integrated circuits
- larger board size as compared with silicon based circuits;
- as with previous boards, the source of power is still required, which may adversely affect such advantages as: flexibility, lightness and enhanced eco-friendliness.

5. Research and development operations

The company is innovative and professional, carrying out research on technology, production and the market. Thanks to R&D, the employees not only have their finger on the pulse of the latest changes in the market but are also able to react accordingly.

The company's R&D is effective, leading to satisfying results, yet it impairs proper functioning in other areas, e.g. finance management or market research.

The company is afflicted by an ailment common for micro-enterprises – an insufficient number of workers that specialize in other matter other than the core function of the company (in this case: other than designing integrated circuits).

Synthetic SWAT analysis for OurChip Company produced by Adam is represented in Tab.1.

Tab. 1. SWAT for OurChip Company

| | |
|--|--|
| Strengths <ul style="list-style-type: none"> - unique technology for designing integrated circuits on the nanomaterial board; - no competition in market niche of the design of the microcontrollers based on nanomaterials; - competent, young and highly-motivated team of programmers and engineers; - company's image in line with requirements set out by the UE support and investment programmes aimed at supporting innovative enterprises; | Weaknesses <ul style="list-style-type: none"> - low credibility of the company, e.g. no evidence of plausibility of the new technology, - limited knowledge on the possibility of producing plastic-board microcontrollers, their parameters and properties; - no capital available to secure uninterrupted work on prototypes and the company's development; - no department responsible for finances and strategy in this respect; - no experience; - no insight into mass production of plastic-board microprocessors; |
| Advantages <ul style="list-style-type: none"> - prospective popularity of electronics based on plastic; - financial support from government institutions or business/ new technologies organizations; - establishing cooperation with scientific bodies interested in research on nanomaterials; - getting an order to design a microcontroller to a large system; | Threats <ul style="list-style-type: none"> - feeble interest in designs of electronic circuits based on plastic due to their restricted efficiency; - low profitability of designing plastic-based circuits, - reinforced competition in the branch or monopoly of big corporations; - no possibility to produce the circuit prototype or to establish a serial production; - OurChip microcontroller's incompatibility with a larger system within which it is to operate; |

6. The steps taken by the company in order to gain capital

At this stage of company's development raising capital for further development of the company featured prominently on Adam's list of priorities.

As early as the beginning of 2006 Adam made attempts to acquire the capital of 600-800 thousand PLN.

The bank loan option was played down from the start as, according to the opinion shared by six bank institutions, the company was not creditworthy and failed to present suitable credit security that the banks evaluated to be in the range of 1.1 - 1.4 million PLN.

OurChip was not in debt, and its overhead expenses were covered from the owner's personal resources. Nevertheless, the company did not process any orders and did not have any income. The company's capital was insufficient to secure credit in the range of 600-800 thousand PLN.

Adam ventured further to raise the necessary capital. Armed with information on the well-developed infrastructure of support for entrepreneurship in the Malopolska voivodship, and in Krakow, he embarked (all starry-eyed) on a search of institutions and organizations that would be ready, willing and able to assist him in getting the capital needed for the development of his highly innovative company.

Unfortunately, the first problems started to crop up as he was drawing up a list of institutions and organizations that offering support to entrepreneurs in finding capital. Although the list of business-related organizations in the Malopolska voivodship showcased over 57 institutions or organizations, excluding the banking sector (Information Booklet 2006), Adam managed to identify only 12 of them. On closer inspection the list of organizations that could (potentially) help OurChip to obtain the capital needed was narrowed down to seven only:

- Business Center Club Loza Malopolska
- Foundation for Economic Promotion of Krakow Region
- Centre for Innovation, Technology Transfer and University Development
- Academic Incubator of Entrepreneurship
- Micro Fund Ltd. with a branch in Krakow
- Micro Initiative Ltd.
- Malopolska Agency for Regional Development

The visits and talks in each of the organizations mentioned promptly revealed the fact that none of them had the capacity to assist or perform intermediary functions in securing capital in the range of 600-800 thousand PLN. Moreover, despite claiming to offer counseling services (or even assistance in drawing up project applications for EU programmes), none of the above organizations provided competent assistance, nor information about a person or institution that would help Adam resolve the problem.

In April 2007, a financial specialist was appointed and assigned the task of preparing a list of possible sources of capital.

The list prepared by the new employee comprised:

- resources from European Union sources (structural funds)
 - o Human Resources Operational Programme (B8, Z2)
 - o Innovative Economy Operational Programme
 - Priority Axis 4. Investment in Innovative Enterprise (B1, B2, B3)
 - Priority Axis 5. Information Dissemination.
 - Axis 6. Polish Economy on International Market:
- Malopolska Programme for Regional Development
- Private Equity and Venture Capital Funds
- Business Angels
- Support programmes other than structural funds:
 - o Industrial Development Agency (joint stock company). Innovation Centre FIRE ARP (joint stock company).

Together with the new financial specialist, Adam started to analyse the rules and procedures of application for resources within the structural funds of the European Union. It soon transpired that two heads were not enough to analyse and evaluate every single programme assessing their suitability to assist the company in getting the necessary capital.

The attempt to participate in the Malopolska Programme for Regional Development also failed. Following a series of interviews with clerks in the Voivodship Office in Krakow, in an attempt to join the programme, Adam was led to believe that his 'far from impeccable Polish, and his dual citizenship undermined the credibility of his assertions that he could run a business in Krakow at least until the year 2012.

Tired and disappointed, Adam turned his thoughts to Private Equity and Venture Capital funds. This segment of the financial market has not been sufficiently developed in Poland and the supply of capital is far from substantial. However, this is not the biggest problem for Adam. The problem is - should the investor be found - Adam may face the prospect of losing independence and control over the company. Adam still firmly believes that the new technology of integrated circuits on the plastic base has excellent prospects, and he would like to be a part of it.

7. Latest actions of OURCHIP

Early in 2007 the company undertook actions to set out principles of information strategy regarding the future Our Chip product, addressed to:

- a) companies operating on integrated electronic systems (potential customers)
- b) investors
- c) would-be employees (e.g. Financial Director, Operational Director)

As previously, OurChip does not communicate a single, accurately defined product, but only signals '(...) a promise addressed to the target groups' (Communication Strategy 2007). Although the future product of OurChip will take on the form of microcontroller, the media message will carry a wider definition: microprocessors.

This promise translated into an advertising text which read as follows:

'Our unique technology of designing microprocessors on a nanomaterial board enhances the products and systems and results in a pioneer, unprecedented value for the end-user'.

8. Further Reading. Support Material. Questions and Answers.

1. What is the most serious problem looming ahead for OurChip company?
2. What mistakes has Adam made?
3. What types of dysfunction may be identified in the enterprise and business support system in the Malopolska region? To what extent are these dysfunctions typical of the region and of Poland, in general?
4. Which option of acquiring the resources for the development of OurChip company seems most appealing? Why?

Ad 1)

Raising the capital prerequisite for further development of the company is not the only problem OurChip is faced with. This problem stems from the lack of a hallmark product that could be offered to the group of clients and investors alike. This, in turn, is connected with a lack of clearly defined strategic planning.

Ad 2)

The owner has made several mistakes:

- not defining with sufficient accuracy neither the product nor the target group
- while emphasizing the importance of technological and production research, he has neglected market research
- not conducting an analysis of the potential integration .

Ad 3)

- insufficiently developed subsystem of financing business enterprise, especially in the area of new technologies
- lack of coordination between institutions building the system, e.g. exchange of information, re-directing entrepreneurs to other institutions where they could receive the assistance they require
- bureaucracy and reserved trust towards entrepreneurs

Ad 4)

Considering the limitations of the Polish system, it would seem appropriate to turn to VC and PE groups as well as business angels. The American connections of the company owner and his familiarity with the American financial market may be of help.

9. Lessons learned

- in identifying certain possibilities of setting up a business operation, the entrepreneur must accurately define the product (or service) as well as the target group
the flexibility of the offer and focus on the client's needs does not justify neglecting the creation of a hallmark product or service, to gain at least borderline credibility in the eyes of the client
- to design integrated circuits it is prerequisite to set out in advance a strategy of integration
- the specific characteristics of the integrated circuits design sector make it very implausible for the advanced projects to be realized by small, emerging companies.

10. List of additional sources

Appendix 1: Business Opportunities in Malopolska voivodship

(from: http://www.cracowonline.com/36_Business_and_Education_Opportun.htm)

The most visible feature of the Malopolska voivodship's (Malopolska region) economy is its great diversity. All significant branches of economy are represented here - from high technologies and banking to chemical and metallurgical industries, coal, ore, food processing, spirit and tobacco industries. The most industrialised city of the voivodship is Krakow. The largest regional enterprise is operating here the Tadeusz Sendzimir Steelworks employing 17,000 people. Another major industrial centre is located in the west, in the neighbourhood of Chrzanow (production of railway engines) and Oswiecim (chemical works).

Tab. 2 Key figures about Malopolska region

| | |
|---|--|
| Capital | Krakow |
| Area | 15,144 sq. km |
| Population - of which urban | 3,260,900 49.7% |
| Special Economic Zone | Krakow Technology Park |
| Universities | 18 (including: Jagiellonian University, AGH University of Science and Technology, Krakow University of Economics, and Krakow Technical University) with approx. 200,000 students |
| Selected business supporting organizations | Investor Assistance Centre, Krakow Malopolska Agency for Regional Development (joint stock company) |
| International airport | Krakow – Balice |
| Main sectors | IT, banking, food processing, spirits, tobacco, chemical, coal, steel |
| Registered business entities - of which with foreign capital | 290 687 2 609 |

FDI as of December 2005 reached USD 6,840 billion. Since 2000 the Malopolska Region's share in total foreign investment in Poland has been highly stable, in the range of 7.3-7.6%. This tallies with the Malopolska voivodship's share in the GDP, which was at 7.2 - 7.5% in the same period. FDI in

Malopolska is diversified geographically, with Krakow, which has 23% of the voivodship population, attracting 70 percent of FDI, mostly in trade and services. FDI is concentrated in Krakow and in the local county areas: Krakow, Wieliczka, alongside the western borderline of the voivodship, in the counties of Chrzanow, Olkusz and alongside national road no. 4 (from Krakow to Tarnow).

Selected foreign investors with over \$1 million worth investments in Poland, present in Malopolska voivodship:

- HVB - banking
- Kronospan Holdings Ltd. - wood and wooden products
- Saint-Gobain - glass manufacturing
- Philip Morris - tobacco processing
- Electricite de France Internationale - power, gas and water supply
- IPC - pulp and paper
- Air Liquide - chemicals and chemical products
- Pliva - pharmaceutical
- Delphi Automotive Systems - automotive
- Fleury Michon - food processing
- Carlsberg - brewing
- Man - automotive
- Becker Industrial Coatings AB - chemicals
- Electrolux - BPO - finances centre
- Royal Dutch Shell Group - BPO – finances and bookkeeping centre

Other companies have located their finance and accounting quarters in Krakow, e.g. Cap Gemini or Lufthansa, or research centres: ABB and Delphi, or software design centre, e.g. Motorola.

Krakow

Krakow (with the population of nearly 780,000) is the scientific, administrative, financial and economic centre of Southern Poland. It is a city with over a hundred research and development institutions, as well as 18 universities, among others:

Jagiellonian University (number of students: over 44,000)
Selected faculties: medical analysis, biology, biotechnology, chemistry, physics, geology, information technology, materials engineering, mathematics, law, psychology, sociology, medicine, dentistry.

AGH University of Science and Technology (number of students: over 28,500) Selected faculties: automatics and robotics, electronics and telecommunication, geodesy and cartography, mining and geology, information technology, materials engineering, metallurgy, chemical technology.

Krakow Technical University (number of students: over 16,000) Selected faculties: automatics and robotics, construction, electrical engineering, technical physics, information technology, chemistry and process engineering, mathematics, mechanics and machine construction, chemical technology.

Krakow University of Economics (number of students: over 18,500) Selected faculties: economics, finance and banking, spatial management, information technology and econometrics, business and marketing.

Krakow Academy of Agriculture (number of students: 10,000) Selected faculties: biotechnology, economics, geodesy and cartography, environmental engineering, forestry, horticulture, agriculture, agricultural and forestry technology, animal husbandry.

By the end of 2004 the R&D institutions in Malopolska voivodship employed over 17,000 workers, which accounted for 13.5% of the total number of employees in the sector.

With over 60% of residents under 45 years of age, Krakow is the city of the young and well-educated who provide a perfect environment for the development of economy and constitute a decisive factor of the successful development of the region.

The exceptionally powerful position of Krakow as a research and scientific centre, a host of completed investments (including infrastructural ones), the young, skilled and well-educated workforce, easy accessibility and transport connections, and last but not least, the most exceptional atmosphere, are among the foremost magnets for investments and business activities.

Human resources are an indubitable asset of Malopolska voivodship. Compared with other regions in Poland, Malopolska fares better with respect to: demographic profile, society age-breakdown, situation on the labour market, social confidence (citizenship society).

The Special Economic Zone: Krakow Technology Park

The Special Economic Zone - Krakow Technology Park was established in 1998. Its territory, appropriated for industrial development (greenfield investment projects), covers a total area of 122.07 ha and consists of four sub-zones located in Krakow and Tarnow.

The strategic objectives of the Special Economic Zone include: development of the advanced technology sector, in particular information technology and telecommunication networks, material engineering, health care, medical engineering, genetic engineering, biotechnology and environmental protection ensuring favourable economic, organisational and infrastructural conditions for domestic and foreign investors employment of the scientific and research potential of local universities by the transfer of the results of scientific research and advanced technologies to the industrial sector, as well as education and training of professional staff supporting the development and restructuring of the existing companies by the delivery of innovative technologies and organisational concepts.

The Krakow Technology Park consists of four separate areas: the 36-hectare Jagiellonian University Technology Park, the 30-hectare Technology Park of the Krakow University of Technology, the 35-hectare Sendzimir Steelworks Technology Park, and the youngest 21-hectare Tarnow Industrial Cluster. The first three are situated in various corners of Krakow itself, whereas the last one has its location in the city of Tarnow some 90 kilometers east of Krakow.

Main Investors in The Special Economic Zone - Kraków Technology Park:

- Motorola Inc. (USA)
- RR Donnelley (USA)
- AMS (USA)
- ComArch SA (Poland)
- AZ-Soft SA (Poland)
- Alcro-Beckers AB (Sweden)
- ABM SOLID SA (Poland)

Like in other special economic zones, entrepreneurs investing in SEZ-KTP may apply for public support, i.e. income tax exemptions. These exemptions are granted to companies implementing investment projects or providing new job opportunities.

Labour market

Total number of employees in the voivodship (as of August 2005), is at 2,031,000.

Numbers employed in selected sectors:

- Industry (total): 173,051
- Construction: 28,104
- Trade and repair: 87,113
- Hotels and restaurants: 8,323
- Business services including real estate: 31,759

Average monthly gross salaries in private sectors:

- industry: 2,355 PLN
- construction: 1,940 PLN

Unemployment rate in the voivodship: 14.0% (at 18,1% average in Poland)

Total number of the officially registered unemployed: 180 900

The Malopolska region has well over several dozen institutions supporting economic growth in the region and across Poland. The agencies and foundations encompassing the entire voivodship include:

- Malopolska Agency for Regional Development (joint stock company) (MARR),
- Malopolska Agency for Energy and Environmental Management Ltd. (MAES),
- 'Partnership for Environment' Fund, (FRLD-MISTIA)

In 2004 in Malopolska voivodship there were 15 institutions for promotion of economic development, 21 economic organizations (economic self-government, chambers of commerce, etc.) and 17 other organizations supporting entrepreneurship.

In 2003 in Malopolska voivodship there were 31 commercial banks, with the total of 418 branches, as well as 5 (out of 16 in Poland) institutions offering loans:

- Fund for Economic Promotion of Krakow region
- Fund for Development of Rabka Region
- Mikro Initiative Ltd.
- Malopolska Agency for Regional Development
- Local Government Association for Entrepreneurship and Development

- In 2003 in Malopolska voivodship there were 3 funds for credit warranty, of which only one was in Krakow (Malopolska Agency for Regional Development)

The analysis of the following key indicators of the level of competitiveness in the year 2003 placed Malopolskie voivodship on second position as compared with Mazovian, Silesian and Pomeranian voivodships:

- workforce headcount in research and development per 1000 population
- the ratio of investments in research and development (R&D) per 1 inhabitant,
- the ratio of investments in innovative business in industry per 1 inhabitant,
- the ratio of investment in research and development to GDP,
- the number of automated and computer-led production lines per 1000 industrial enterprises.

Malopolska Voivodship Strategy for Growth (excerpt)

Area 1: Active and knowledgeable society

Development of information society integrated public services on digital platforms

- mobile phone network, 3G, VoIP, digital television, Internet, etc., operating round the clock,
- system of educational services
- system of trainings for workers of public and educational institutions
- tele-information solutions enhancing social convergence and citizens' participation in public life (e-democracy)
- reinforced investments in research on Information and Communication Technology (ICT)
- system of support for innovation and investment in ICT branch development (including MSP)
- system of development of human resources for the sector of innovation technologies and ICT

References

Domański B., Jarczewski W. (eds) 'Climate for Investment in the Malopolska Region', Department of Economy and Infrastructure, Marshal Office of the Malopolska Region Krakow 2006

Grupa Stenna, 'Pole C – Gospodarstwo, kapitał, kreatywność, technologie', Warsaw 25 July 2005

Information Booklet (2006) Business Organisations and Research and Development Institutions in the Malopolska region, Krakow December 2006

OurChip Co. (2007) Communication Strategy,

Strategy for the Development of the Malopolska Region - Malopolska 2015, Marshal Office of the Malopolska Region, Krakow 2006

Appendix 2. Financial Analysis of OurChip performance in the period of February 2006 – December 2006

| | ASPECT | March | April | May | June | July | August | Sept | Oct | Nov | Dec |
|-----|--|----------|----------|----------|---------|---------|----------|---------|----------|---------|---------|
| 1 | Receipts from sales of services | 1820 | 2150 | 2400 | 2380 | 1700 | 1950 | 2180 | 3150 | 2850 | 3850 |
| 2 | Other receipts with surplus profit | | | | | | | | | | |
| | | 380 | 450 | 380 | 680 | 750 | 610 | 610 | 560 | 410 | 440 |
| 3 | Subsidies | - | - | - | - | - | - | - | - | - | - |
| 4 | (+) decreased (-) increased receivables | - | - | - 1 000 | - 1200 | - 1300 | -1450 | -1600 | -1780 | -1950 | -1880 |
| I | Total receipts 1+2+3+4 | 2200 | 2600 | 1780 | 1580 | 1760 | 1100 | 1190 | 1930 | 1310 | 2410 |
| 5 | Incurred costs of sales diminished by | 15 000 | 16 300 | 18 000 | 18 500 | 19 400 | 19 800 | 25 000 | 30 000 | 31 000 | 33 200 |
| 6 | amortization and interests | 12 200 | 13 500 | 15 200 | 15 700 | 16 600 | 17 000 | 22 200 | 27 200 | 28 200 | 30 400 |
| 7 | Taxes (income, VAT, and other) | 450 | 520 | 340 | 310 | 340 | 220 | 230 | 380 | 260 | 480 |
| 8 | Extra losses | 200 | 250 | 280 | 270 | 210 | 230 | 780 | 850 | 950 | 1100 |
| 9 | (+) increased (-) decreased stock inventory | - | - | - | - | - | - | - | - | - | - |
| | (+) decreased (-) increased accounts payable | - | - | - | - | - | - | - | - | - | - |
| II | Total expenses 5+6+7+8+9 | 27 850 | 30 570 | 33 820 | 34 780 | 36 550 | 37 250 | 48 210 | 58 430 | 60 410 | 65 180 |
| 10 | Interests on credit | - | - | - | - | - | - | - | - | - | - |
| 11 | Credit pay-off | - | - | - | - | - | - | - | - | - | - |
| III | Total financial expenditure 10+11 | - | - | - | - | - | - | - | - | - | - |
| IV | Net revenue I-II-III | - 25 650 | - 27 970 | - 32 040 | -33 200 | -34 790 | - 36 150 | -47 020 | - 56 500 | -59 100 | -62 770 |
| 12 | Expenses on investment | - | - | - | - | - | - | - | - | - | - |
| 13 | Dividends for shareholders | - | - | - | - | - | - | - | - | - | - |
| 14 | Awards and other payments from profit | - | - | - | - | - | - | - | - | - | - |
| V | Total expenses at the discretion of the company owner 12+13+14 | - | - | - | - | - | - | - | - | - | - |
| 15 | Revenue from financial instruments (credits) | - | - | - | - | - | - | - | - | - | - |
| VI | Net funds IV-V+15 | -25 650 | -27 970 | -32 040 | -33 200 | -34 790 | -36 150 | -47 020 | -56 500 | -59 100 | -62 770 |

Teaching Negotiation Skills

University Model Based on Entrepreneurial Experience

Jerzy Rosiński (Ph. D.)

Jacek Klich (Ph.D.)

Institute of Economics and Business Management (Jagiellonian University), CITTRU
Poland, 31-387 Krakow, Gronostajowa 3
Fax: +48 12 664 69 14

Jerzy Rosiński: jerzy.rosinski@uj.edu.pl
Jacek Klich: uklich@cyf-kr.edu.pl

Keywords

Entrepreneurial competences, post-graduate teaching

Abstract

This chapter describes assumptions and the teaching process of the course on negotiation skills as run at the Institute of Economics and Business Management (Jagiellonian University). Being one of the most popular workshops of studies for a B.A. degree, it is also applicable in teaching entrepreneurial competences (known as soft skills).

Standard teaching of negotiation skills revolves around one of four approaches. This chapter suggests which of them should be given prominence and what is best order for other approaches application to achieve the best results. The authors also present a methodological structure of classes and possible applications of this approach to teaching other entrepreneurial skills.

1. Introduction to the model

This chapter presents a case study of a module of a course within a tertiary education curriculum at the Institute of Economics and Management, which was founded in 1996 and presently employs 40 academic teachers. It is an organizational unit of the Institute of Management and Social Communication at the Jagiellonian University.

As part of such a big organisation as a university,¹ the institute has the capacity to shape the specific teaching style, characteristic of applied sciences. However, at the same time, it has to satisfy the criteria of academic teaching. This causes a necessity of integrating academic knowledge with a practical approach prevalent in business.

The breakdown of persons participating in the course (students) is determined by the organisational positioning of the Institute at the University, whereby the students expect to obtain 'more' than a mere economic perspective of entrepreneurship, and thus are more open to content pertaining to relational elements (e.g. as described by social psychology).

The stakeholders of the course - similarly to the ever growing majority of students of entrepreneurship-related departments of studies, expect quick-and-ready solutions, tools adapted to the reality of the market. More so, they expect the persons running the course to shower them with examples of entrepreneurial activities stemming from experience of the Polish market. This tendency permeates a wider group of students, less inclined to spare no effort to learn things by themselves (through literature and bibliography reading) and expect the trainer to provide a 'prêt-a-porter' product.

2. Description of the model

Teaching negotiation skills at the Institute of Economics and Management rests on certain assumptions (presented below) that relate to specifically designed academic courses, yet may also prove useful in teaching so-called soft skills, inherent in mastering entrepreneurship.

Assumptions:

1. Negotiation skills largely depend on personality traits (extroversion, flexibility, conciliatory manner). However, it is not plausible to mould personality skills in a direct way due to their formation² or specific position of tertiary education institutions in human development³.
2. Effectiveness of adult education hinges on class structure based on the assumptions of adult learning as defined by D.A. Kolb (Rosinski J., Rychlicka A. 2001). As this is a widely recognized theory (Senge P. et al. 2002), we will only limit ourselves to presenting relevant reflections pertaining to teaching adults.

The D.A. Kolb cycle model comprises 4 stages of learning and the main thesis rests on the requirement that all four stages of the process must be completed for the process to be effective (see: illustration 1).

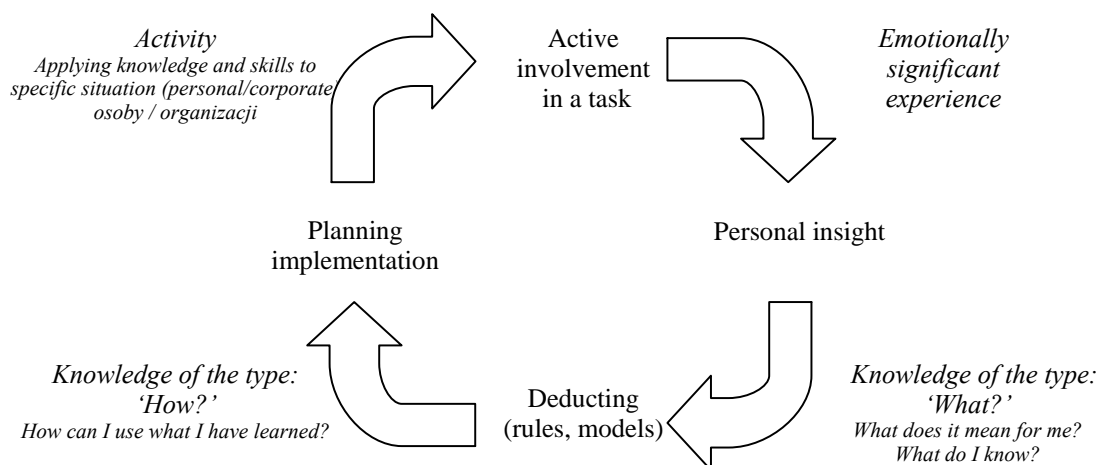


Illustration. 1. Learning Cycle according to D.A. Kolb (the authors' presentation derived from Senge P. et al. 2002)

In the light of the above it transpires that classic models of academic teaching focus on reflection leading to the formulation of a universal model, at often ignoring the question of application of the uncovered rules, concentrating rather on explaining of the phenomena at hand and on predicting their future form. Classic academic model validates less contribution on the part of audience in to process of designating meaning, and does not recognize the need of employing emotions in the process of group learning. The academic approach focuses on dissemination of specialist and fragmented knowledge. As

the concentration span of the teacher lasts only $\frac{1}{4}$ of the cycle (see: illustration 3A), this leads to awarding students representing one type of learners (see: illustration 2) - assimilators⁴.

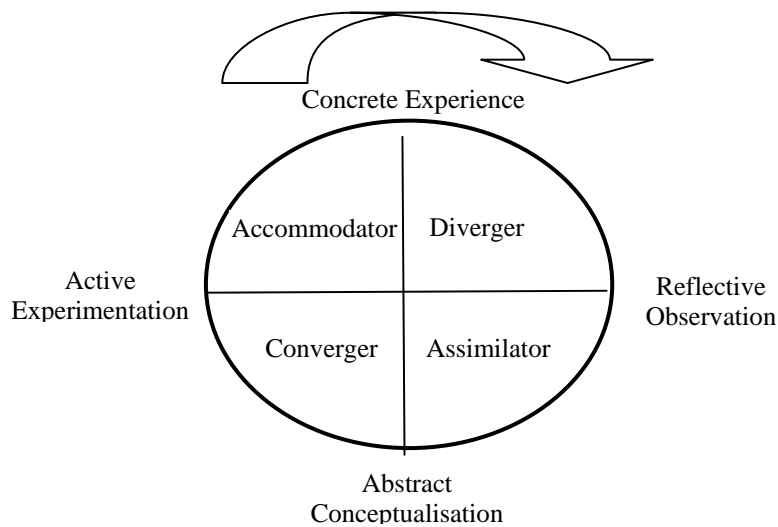


Illustration 2. Four-stage learning cycle of D.A. Kolb. (derived from Rosiński J. Rychlicka A. 2001)

This learning model for entrepreneurship seems distinct from the model preferred in academic learning (illustration 3B). An efficient entrepreneur is expected to display traits and skills typical of persons successfully holding sales-related positions (or in sales and marketing departments) and for those people who function effectively in positions that require social dexterity (e.g. in public relations departments). This way of functioning is characteristic of accommodator-type⁵ (see: illustration 2) - the type standing in contrast to assimilator type, which is preferred for traditional academic learning. In other words, by applying the traditional model we 'generate' successive academics, whereas we have obvious system problems with the efficient teaching of entrepreneurs.

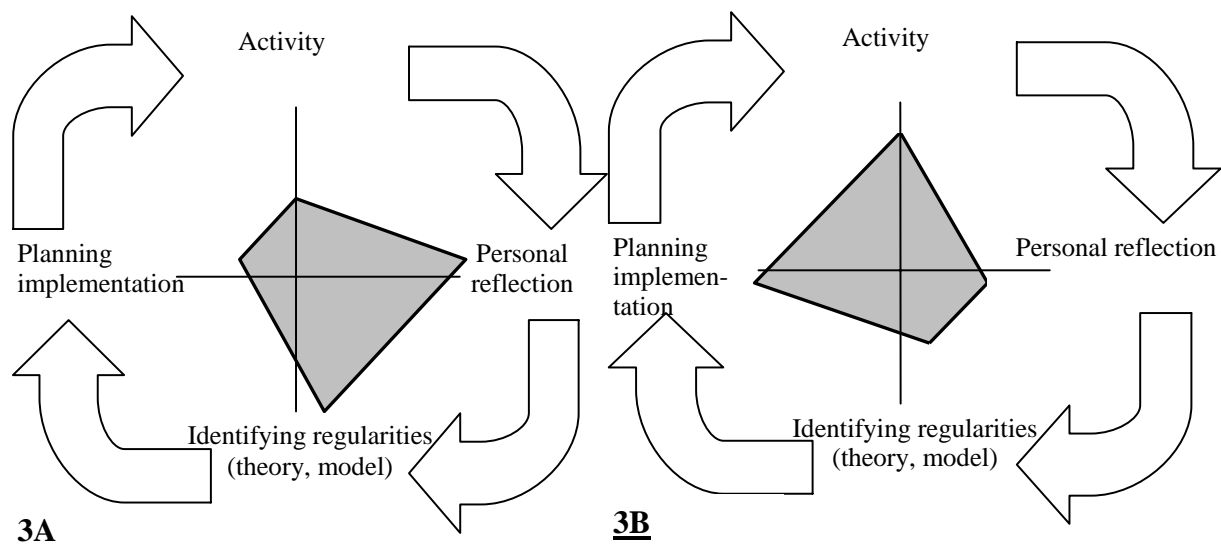


Illustration 3. Learning cycle of D.A. Kolb: 3A – Assimilator learning style; 3B – Accommodator learning style

The dilemma may be resolved by incorporating the entire cycle of D.A. Kolb into academic teaching, which makes the classes appealing to students of all four styles of learning, and provides ground for development of every single learner's potential, irrespective of their future career.

For this kind of work to be possible the teacher has to be acquainted with theoretical models and be able to present their personal and creative interpretation.

The teacher has to display an open attitude and be ready to experiment, not to mention the dexterous use of didactic structures suitable for group teaching.

Another attitude relates to an openness to others (derived from an openness to experience and flexibility) – which ensures effective performance at that stage of personal reflection. Thanks to this not only the group listens to the teacher (in stage 3 of D.A. Kolb cycle) but also the teacher is receptive to learners' reflections (in stage 2 of the cycle). Listening to the opinions of the group antecedes theoretical and synthetic conclusion. It may seem obvious but still a great number of teachers adopt a position of an omniscient person [*besserwieser*] fearing the opinions of others.

An open attitude should go hand in hand with business implementation of skills needed in presenting this kind of knowledge.

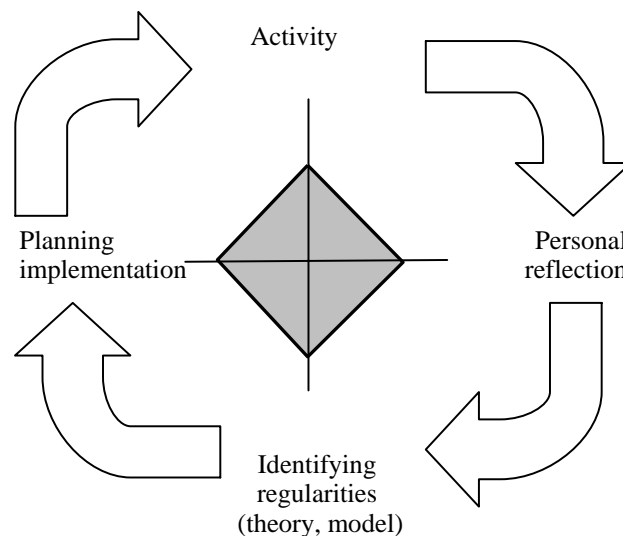


Illustration 4. Learning cycle of D.A. Kolb: planning teaching session accounting for all four types of learning styles.

3. Description of the application of the model

The above assumptions concerning the specifics of entrepreneurship and learner attitudes are given consideration in a 45-hour social communication and negotiation course completed by an exam. The course is in workshop form and the classes are run in 6-hour blocks.

Besides fulfilling the above mentioned assumptions regarding teaching, it was crucial to adopt a methodology suitable to specific subject matter. As negotiation may be understood in a plethora of ways, a decision had to be made on one leading approach. Four fundamental approaches to the issue of negotiation were derived from W. Mastenbroek (1996):

- process with clearly distinct stages
- as a set of guidelines and tactics
- as persuasive communication
- as the art of 'marrying' the opposites and resolving dilemmas

The opening stage of the classes is built around the concept of negotiations as the art of marrying opposites. Such an approach reinforces the attitude of the person in the negotiation process⁶. Also it enables the introduction of core theoretical notions (e.g. negotiation style, attitude to the situation of negotiation, BATNA).

The next step is that of negotiation as a process. This approach allows the creation of a map of understanding the negotiation as specific activities taking place in time, thanks to which the participants understand their behaviours in a wider context (time, the sequence of events, interdependence of actions).

Only when the participants have reinforced their personal resources and once they understand the process, are they ready for information on persuasive negotiation and on the rules and tactics involved.

Each session ⁷ is thus constructed to include the entire D.A. Kolb learning cycle at least twice in a 6-hour module. Every class starts with a game/ case study / experiment, which allows a start of the cycle of adult learning (see illustration 2) from the stage of Active Experimenting⁸. The next stage (Reflective Observation) allows to gather reflections upon the negotiation game. Often this stage takes on a form of discussion between the persons in a group with the teacher, taking on the role of moderator in the discussion.⁹ The next stage is that of the conclusion of the discussion, conducted by the teacher (Abstract Conceptualisation stage – see illustration 2). It is possible to make use of a prepared presentation, however it is more useful to make a conceptualisation on the material provided by the participants¹⁰. The winding up stage (Active Experimentation) may take the form of a moderated group discussion or brainstorming (blue-skying) on the application or a short lecture of the trainer on the application of the knowledge.

The choice of the form of closing the learning cycle depends largely on the experience of the group. Namely, the groups characterized by low experience (students of the first years of university) welcome ready ideas of knowledge implementation, whereas groups with more experience (students of final years of university have certain experience of working in various organizations of this type) the more positive reaction of the group when invited to share their experience or to use their experience to find application of what they have learned.

Construction of a single session of the course

To exemplify this model we may consider one of the sessions early in the course. The classes concentrate on understanding negotiation as a way of combining opposites and resolving dilemmas. The learning cycle starts with the experiment of the type: Caring for your business based on W. Mastenbroek's model. The next stages of learning use games relating to all four fundamental dimensions (dilemmas) according to Mastenbroek. Upon completion of all the games, the integration of the model (presentation) is carried out, after which the participants embark on games reflecting simple integrational negotiation. The games provide feedback on individual negotiation styles. As a result, not only do the participants' behaviours improve but they also gain new knowledge.

The model under discussion was initially based on the basis of experience of business training. The structures – tried and tested under market situations – were cushioned by methodological reflection and successfully implemented into academic teaching. The authors experienced in the model may apply teaching negotiation skills and various soft skills, not only during workshops classes in the tertiary education. The model has been applied for perfectioning the competences of teams of small medium entrepreneurships (SMEs) whereby the employees and employers alike engaged in the learning process. The discussed approach stands the test in relation to teams of corporations. When applying the approach one has to remember that:

1. in the case of small medium entrepreneurships (SME's) it is advisable to consider separating the owners from the learning group. The owners want to ensure their money is well spent. However their presence may often paralyze unfettered group reflection and be detrimental to the learning process. Paradoxically, the absence of the owner at the training makes it more viable.
2. In large corporations we often come across organizational barriers hampering implementation into everyday life the substance learned during training. Therefore undertaking courses of action according to the discussed model does not guarantee success. When preparing the classes one

needs to consider the aspects of the management culture that may hamper implementation of new skills or favour old habits and attitudes. A typical example would be an attempt to change the attitudes of salespersons in negotiations with clients in a situation where a commission system in the company prompts the salespersons to close the deals swiftly and to get the largest number of clients possible, without taking into account the profit made on an individual client.

Table 1. Workshop module layout

| Learning cycle stage | | | | Timing (minutes) |
|--|--|--|---|------------------|
| Specific experience | Reflective observation | Abstract generalization | Active experimentation | |
| Negotiation game: Stock Edelweiss ¹¹ | | | | 15 |
| | Discussion moderated by the person who runs the workshop | | | 20 |
| | | Mastenbroek Model: elements of negotiator's behaviour that affect the 'Looking after business' dimension – a multimedia presentation | | 15 |
| | | | Real life examples of the behaviours increasing 'Looking after business' ¹² | 10 |
| Closing the D.A. Kolb cycle Result: One of the negotiation's dimensions is grasped: 'Looking after business'. This understanding is combined with adequate courses of actions and backed up by experiences from the participants own lives. Time 60 minutes | | | | |
| Negotiation game 'Sharks' Island' | | | | 20 |
| | Moderated discussion | | | 20 |
| | | Model of Mastenbroek: elements of negotiator's behaviour influencing the dimension: 'Building strength' - multimedia presentation | | 15 |
| | | | Real life examples of the behaviours increasing 'Building strength' dimension ¹³ | 5 |
| Winding up the cycle of D.A. Kolb Result: Dimensions of 'Flexibility' and 'Atmosphere' are introduced, alongside the adequate course of action, additionally combined with participants' own experience. Time: 60 minutes | | | | |

| | | | | |
|---|---|--|---|----|
| Negotiation game „The Eggs of Dodo Bird” | | | | 10 |
| | Moderated discussion | | | 15 |
| | | Model of Mastenbroek: elements of negotiator's behaviour influencing the dimensions: 'Flexibility' and 'Atmosphere' - multimedia presentation | | 25 |
| | | | Examples taken from real life and from business | 10 |
| Winding up the cycle of D.A. Kolb Result: Dimensions of 'Flexibility' and 'Atmosphere' are introduced, alongside the adequate course of action, additionally combined with participants' own experience. Time: 60 minutes | | | | |
| Negotiation game ^{14,15} | | | | 50 |
| | Small-group discussion of the game outcome ¹⁶ | | | 15 |
| | | Presentation of the game results on the group forum ¹⁷ | | 15 |
| | | | Conclusions regarding application of the desirable behaviours observed when playing the game. ¹⁸ | 10 |
| Closing the cycle of D.A. Kolb. Result: The participants of the classes receive feedback on their personal negotiation style (in the categories of Mastenbroek model) and how it affects the negotiations outcome. The participants know what behaviours affect positively the outcome of integrational negotiation. Time: 90 minutes The end of the classes | | | | |

4. Description of how the model can be used by other institutions or in other situations

Undoubtedly, any application of the model in non-academic organizations may entail the necessity to change the proportions of the realization time: less time spent on the theoretical presentation at the simultaneous increase of time spent on presenting practical application. However it is the authors' opinion that it is more viable to adhere to the model presented in this chapter, as those in business organizations need reflection of a more universal character. This reflection enables them to find by themselves a wider range of application of knowledge and skills, whereas by providing them with long lists of ready-made solutions we may curtail their creativity. Naturally, in the learning process, the participants have to be presented with a certain number of possible applications and references to their life. However - metaphorically speaking - some leavening is needed for the participants to bake bread themselves. Presenting a long list of possible applications is like serving sliced bread in a packet. No one is interested in baking their own bread when a ready-made loaf is at hand.

Bibliography:

1. Mastenbroek W. *Negotiations*, PWN, Warsaw 1996
2. Rosiński Jerzy, Rychlicka Anna (2001) „W stronę uczenia przez rozwiązywanie problemów” (*Learning Through Problem Solving*) in: Borkowski T. [ed.] „Dylematy kształcenia menedżerów u progu XXI wieku” (*Dilemmas of the Education of Managers at the turn of the XXIst century*), Wydawnictwo Akademickie, Krakow
3. Senge P. et. al. Piąta dyscyplina, materiały dla praktyka. Jak budować organizację uczącą się.” (*The Fifth Discipline. Practitioner manual. How to Build the Learning Organisation*), Oficyna Ekonomiczna, Krakow 2002

Footnotes:

- ¹ Founded in 1364 the Jagiellonian University is the oldest Polish university, presently providing education to well over 44,000 students, employing 3605 academic teachers.
- ² Personality traits are saturated with elements of genetic inheritance or social inheritance (time spent in the family of childhood)
- ³ The character of objectives of the organization does not allow for the forms of development based on sociotherapy or psychotherapy.
- ⁴ Assimilator shows propensity for making theoretical models, converging observations into integrated explanations. Practical implementation, or the 'human' face of project, are less important than logical and precise theory. Weaknesses include: intense focus on models, at the detriment of reality check; low regularity; inability to learn from experience or to draw conclusions from mistakes committed at the implementation phase. The assimilator style is an effective strategy of behaviour in the areas connected with information and knowledge-sharing (Rosiński J., Rychlicka A. 2001)
- ⁵ Accommodator learning style is 'hands-on'. A person with preference for this style of learning is best at implementing plans and experimenting, at wholehearted personal commitment in new experience. The person is more prone to take risk and derives pleasure from adapting to new situations. These skills are visible in profession requiring activity and operational talent, e.g. marketing and sales. Advantages: ability to realize plans, leadership skills, risk-taking. The shortcomings of the style include: acting for the sake being active, insufficient focus on goal, generating too many insignificant solutions. The plans made by accommodator are not always realistic while the deadlines are not always kept. (Rosiński J., Rychlicka A. 2001)
- ⁶ Thanks to this the participants identify with the subject at the start of the course, which allows to build and maintain strong motivation for learning.
- ⁷ Irrespective of the adopted approach to negotiation.
- ⁸ Learning cycle may commence with any stage. It is important to go through all the stages of the cycle. Persons of resource prefer to start from Active Experimentation, which additionally gingers up commitment in groups that are task-oriented.
- ⁹ The emotions sparked by the game may be so intense that there is no particular need to encourage others to contribute opinions, which are voiced freely upon completion of the task.
- ¹⁰ The summing up stage takes more time, is 'less sleek' than the presentation and requires more skills on the part of the teacher (moderator of discussions) as well as knowledge on the subject (being flexible in reacting to the changes in substance disclosed by the reflection of the participants). However, this way of acting shows the group that the earlier discussion and reflections are valuable – not distinct from the presentation, providing ground for the conceptualisation.
- ¹¹ Negotiation games were derived from the book by W. Mastenbroek (1996)
- ¹² The trainer shapes the discussion by providing examples from his/her own life, and then invites the participants to follow suit. Providing 3-4 personal examples 'sparkles the fuse' and ignites in participants the willingness to share their own experience.
- ¹³ This element of the cycle does not require much time as the pattern of behaviour appeared in the earlier cycle of D.A. Kolb and by now the participants are well aware of the desirable behaviours.
- ¹⁴ Negotiation game may concern any subject and the scenario and should fulfil the following criteria: possible integration solution (satisfying interests of both parties involved), the extend of potential agreement is relatively broad, the scenario should contain 3-5 negotiation issues (e.g. item price, total purchase amount, pay-by date, after-sales guarantees, timetable of deliveries).
- ¹⁵ The game should be played in 4-person teams, where two persons are negotiating and two are observers.
- ¹⁶ Discussion of the game is done in 4-person groups. The persons who were observers give feedback, by using the categories of W. Mastenbroek model, i.e. 'Looking after Business', 'Building Strength', 'Atmosphere', 'Flexibility'.
- ¹⁷ As the negotiation game provided a broad scope for integration agreement, it is possible to compose a ranking of the achieved results and to establish what types of behaviour (within the model) led to the advantageous solutions.
- ¹⁸ Discussion concerns applications in subsequent negotiation groups, everyday life situations, business negotiations.