

## How we teach Innovation

### **A special programme of the Danube University Krems created for the Lower-Austrian Government**

An Overview for the ERIK Action Visitation group  
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May 4<sup>th</sup>, 2009

By searching for „innovation“ with Google, you get more than 109 million entries. It seems that no one can survive in business without innovative power. Everyone likes to be innovative, but many people can not clearly describe what they understand with “being innovative”.

Around the world, a lot of training programmes have been created to brush up peoples’ innovative strength. Also at the Danube University you can find a Master Programme for innovation management. It takes 4 semesters to finish.

Our goal for the support programme of the Lower Austrian Government was to create a short-time, but highly efficient education programme to strengthen the innovative power of small and medium-sized companies in the region.

### **Motivation required**

Normally, 80 % of the students of our university pay the tuition fees themselves and nearly 100 % decide for themselves to complete the programme. With our course, we have a different situation: The students are more or less new members of their companies and required to attend the programme. Most of them are happy to do so, but also some of them see the programme as an additional burden to their major target - fulfilling the requirements of their innovation project. Therefore at the beginning, we have to make clear to them that they get tremendous benefits from the programme and that they can handle their innovation project better with than without this course.

## **What do innovative people need?**

Skills to create innovation:

- Creativity techniques
- Knowledge management

Skills to “sell” their innovative ideas internally and externally:

- Negotiation - Communication
- Presentation techniques
- Teambuilding
- Conflict management

Skills to lead projects and collaborators:

- Project management
- Leadership skills

More details on the items later on.

## **Timescale**

We started with a seminar programme of only 12-14 days. The students and we found out that we should change some contents and enlarge the programme. Now we offer an 18-day programme which allows us to give a formal certificate after successfully finishing of all examinations. – This needs a minimum of 18 days of lectures.

These 18 days are given in blocks of to 2 – 3 days with approximately one month in between. This allows students to transfer new knowledge and skills to their jobs.

## **Weighting of the subjects:**

1 day is spent for giving an overview of the whole programme, where each trainer introduces his special part.

One third of the whole programme – 6 days – is used for communicative skills. We see this part as one of the most important ones: the best innovative idea can not be realized if it can not be communicated in the right way. This includes presentation techniques, negotiation, teambuilding and conflict management.

4 days are used for Project Management.

PM in various depths is essential for running an innovation project within an ambitious timescale – and we know that the individual innovation projects of the companies have to be done in short time.

4 days are used for creating innovation.

2 days for creativity techniques and 2 days for knowledge management. This part includes also a little bit marketing and positioning.

3 days are used for Leadership Skills.

A very special option for our students. They often do not have an official leading role in their company, but nevertheless they have to lead the innovation project. That means, they have to find team members and give them their best role in order to achieve the goal. Also they are very often newcomers in the company and need to quickly grasp and understand the informal leadership structures which they are dealing with.

### **Sequence of subjects:**

Certainly we start with the introductory day, then the first part of communication follows – presentation techniques and negotiation.

Next, there is project management – between the two blocks, the students have to prepare a project plan.

After this, we offer creativity techniques and knowledge management, Leadership Skills and finish with teambuilding and conflict management.

This sequence gives the best opportunities for our students: First they are able to improve their communication skills. In the phase of starting their individual projects, they need to argue carefully to ensure a good start.

The methods of project management are also taught very soon, in order to allow the participants to decide which form and instruments of project management are useful for their individual business and company.

The next two blocks are spent for creativity techniques and knowledge management. You may say that this is also necessary from the very first moment on, but we had to decide what is more important at the beginning. Our experience showed that this was the better way.

Our participants are mandated with an individual innovation project which has to be finished in an ambitious time frame. We think that setting up new projects is the next step for the companies. When this arises our students are fit for creating new ideas and be really innovative.

Next part is Leadership Skills. For this lectures it is necessary that the participants have gathered some experience in their companies. Normally, the students start their jobs shortly before our programme starts. So they need some time to learn also about the informal hierarchies.

We finish with teambuilding and conflict management. This should enable the participants to reflect the situation in their own company and to improve the creation of project teams for further activities. Efficient conflict management

needs highly sophisticated skills in communication. Therefore, we give the students five months time to exercise their communication skills before they start with the most difficult part in this course.

### **Additional offer – evening session patent law**

Additionally to the lectures, we invite responsible specialists for patent law of the Lower-Austria government and responsible people for this important issue. Subject is patent law in Austria, Europe and worldwide.

Companies who would like to be innovative have to take care about their patent rights. Our evening talk should make our students sensitive on this matter.

### **Completion certificate – necessary examinations**

For a formal conclusion of the programme, the students have to attend minimum 70 % of the lectures and get positive results in all examinations.

We expect a written project plan and the verbal defence of it. For all communication subjects, a practical assessment is done. That is a funny way! The students have to provide presentations to specific questions of communications or they have to make a negotiation simulation with the trainer who plays different roles to give an extra training for difficult situations.

For creativity techniques and knowledge management, we also make a practical assessment.

The new knowledge in leadership skills is tested by group works and followed by a presentation.

With the leaving certificate, 30 ECTS-points are acquired. This credit points are accepted for ongoing studies at the Danube University and also other universities.

### **Prerequisites for students**

The students should have a degree from a university or a "Fachhochschule", or enough practical experience. They come from various industries like IT, chemicals, food, technology, etc.

## Group size

To ensure maximum benefit and highest training effects, we have a maximum of 12 students per group. If the Lower-Austrian Government does not apply for 12 students we give the free places to other interests. The mixture has positive effect on the group dynamics.

## Our Trainer Team

The programme gives 50 % of the success, the trainer-team the other 50 %! There are four specialists who bring both: academic experience in lecturing at universities and practical experience, as all of them are leading consulting companies.

**Mag. Michael Dell** – Business Manager at “Ratio Strategy & Innovation GmbH” – 18 years experience in consulting important companies in- and outside Austria for creating innovations, new product development, strategic analysis and much more. He is responsible for creativity techniques and knowledge management.

**Ing. Dr. Karl Piswanger** – Co-Founder and Business Manager at “Dr. Pendl & Dr. Piswanger Personal & Managementpartner”. Trainer for app. 30 years. He is one of the leading specialists in training communication skills in Austria, and training of the communication items is also his role in our programme.

**Mag. Dr. Anton Platt** – Business Manager at Marketing-Solutions Europe. His company is specialised on the improvement of distribution of companies. He is our specialist for Project Management.

Last but not least **Mag. Johann Schwinner** – Partner at GPM Management Consulting GmbH and specialist for Human Resource-matters. Change of company culture according to new strategies is one of his topics. In our programme he is teaching Leadership Skills.

## Results till now

We performed the programme eleven times till now, 119 students started.

From the second programme on a final examination was possible. Only 4 students missed these final examinations. Also a third of the first group used the chance to catch up the exams.

The participants are very satisfied with or programme. We make evaluations of each module in every programme. The average result for the “General assessment of the teaching unit” was never worse then 1,5 (most time around

1,2), the evaluation of “Lasting practical benefit” was never worst than 1,7 (most time around 1,3)

The main group of each course does miss only one day of the programme.

### **Programme in Detail:**

#### **Project Management**

What should students understand?

Project Management is a comprehensive management tool that helps to accomplish complex assignments

- on time
- on budget
- on quality.

Elements of successful Project Management:



The challenges of Projects:

- No routine tasks
- Limited timeframe (Start- and Enddates)
- Risk - uncertainty about outcomes at the beginning of the project
- Solution is not obvious and cannot be planned 100% in advance
- Complexity
- Working in teams

## **Content of Module 1:**

Before the project is launched.

- Not all organisations are alike -> Interdependencies between types of organisations and project management
- Managing change
- My role as project manager

Laying the foundation of the project.

- Project assignment
- Project charter
- Project team
- Project environment

Project planning

- Project organisation
- Project planning in detail / toolbox.

## **Content of Module 2:**

Conducting Projects successfully.

- Project controlling
- Every day life versus Project management theory
- Expect the "Unexpected"
- Managing conflicts during the project and taking advantage of them
- When the project is challenged

Communication

- Within the project team
- Within the organisation
- Within outside stake holders

Closing the project

- Analyzing and documenting the "lessons learned"
- The job is done when the paperwork is done. – Project documentation
- Customer satisfaction

## **How we do it – Real Life Study**

Projects provided by the students are used to build cases interactively

- Practical exercises after each reaching unit
- Setting up a project as homework between modules
- Discussing student's projects to learn from each other
- Maximise student involvement. Benefit from student's diverse background. Help students to implement project management basics in their company environment.

## **Creativity Techniques**

Basics of creative working

Building of creative teams, roles in problem solution processes

Creativity blockades and their overcoming

Classic creativity techniques, like

- Brainstorming and its borders
- Brainwriting-methods: destructive brainstorming or sabotage storming, 6-3-5 (in groups or computer-based), S-P-O-analysis, Brainwriting-Pool, metaplan, collective notebook
- Osborn's question list
- Attribute-list and morphologic cabinet

Non-classic creativity-techniques

- Synectics
- TRIZ (Altshuller)
  - Basics and history
  - Innovation-checklist
  - Function – benefit-model
  - ideality-principle
  - antagonism-matrix
  - 40 innovative principles
  - Meta-principles
  - ARIZ (algorithmn of innovative problem solving)
  - dwarf-model
  - laws of technical evolution
  - TRIZ-derivates
- Bionik
  - Basics
  - Analogies
  - Co-Evolution
  - 42 principles of bionIQuity ®
  - Bend principles and Miura Ori
  - Trees upgrowth and bone growth
  - Genetic algorithm

## **Knowledge Management**

Basics and definitions

Integrative approach of knowledge management

Strategic knowledge management

Implementation phases and –steps

Knowledge management and Stakeholders

Creation of knowledge-maps

SWOT-analysis

Knowledge management and Web 2.0



Technical basic conditions  
Psycho-social basic conditions  
Case studies  
Examples of technical tools  
Assembling of market-knowledge  
Market-Map  
Portfolio-technique and lifecycle-concept  
Positioning  
Brand and Marketing  
Market acquisition  
Customer-benefit-analysis after Schauenburg.

## **Leadership Skills**

Company Culture – Culture change:  
Create Culture and transfer culture into behaviour.

What does this mean for managers?

- Targets / Standards:
  - Defined
  - Communicated
  - Monitored
- Development:
  - Development-targets for employees
  - Improvement / Innovation potential
  - Establishing of innovation / improvement in teams

What does it mean for employees?

- Targets / Standards:
  - Achieved
  - Possible differences communicated
- Development:
  - Targets achieved
  - Innovation / Improvement ideas given and implemented

What does it mean for Innovation / Improvement Management:

- Systems
  - Allocated
- Development:
  - System accepted (Top-Management and users)
  - Continued improved: Output versus effort

## **Negotiation**

What is a "negotiation" – characteristics and key features  
Planning negotiations

Negotiation strategies and tactics  
Questioning techniques  
Creating win-win – situations  
A new mindset: negotiation is not about “winners” or “losers”  
Proven success-strategies in negotiations

## **Presentation techniques**

Better presentations with systematic preparation.  
Structures of contents  
Time management  
Rhetoric  
Use of various Media  
Visualisation  
Complex ideas pictured presented  
Personal appearance  
Dealing with nervousness  
Persuasiveness strengthen  
Positive overall impression  
Use of flip-chart as a spontaneous medium  
Interaction with auditorium  
Dealing of disruptions  
Questions and pleas

## **Teambuilding**

What is a team (in comparison to a group?)  
How to establish a team  
Phases of teambuilding  
Duties and responsibilities of team coaches  
Decision making in teams, solving of problems  
Role allocation  
Teamwork in projects, processes, integration of new members  
Change management and teambuilding  
Creativity in teams  
Reducing of preconception

The important principles of high-performing teams  
Development of teams – steps of teambuilding, basics and instruments  
Analysis of team-efficiency

## **Conflict Management**

Constructive use of conflict potentials – change of conflict power to positive energy

Localisation of conflicts

Solving possibilities

How blocked conflicts affect

Strategies of conflict management

Making profit from conflict situations

Typical conflicts in business

All **methods of the communication skills** are trained by giving impulse lectures, practical workshops and training sessions. Due to the small groups every participant has various possibilities for individual training. It is our goal to improve the communication skills of every student independent of his personal standard.

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