The method and effect of an education and training program in innovation compared in two different environments and cultures

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<u>Abstract</u>

Based on the experience from two realized projects in Lithuania and Russia, the article will aim to identify practical long term impact of implemented innovation skills and examine the importance of cultural differences in innovation training. Through this discussion, the article will draw out a recommendation for best practice in training and implementation of cross culture innovation.

The Danish Technological Institute (DTI) is located in Denmark and Sweden, and on the basis of experiences from DTI a project regarding the improvement of innovation skills was implemented in Lithuania in 2003/2004, which was before Lithuania joined the EU. A similar project was implemented in Leningrad Oblast, Russia in 2005.

In both Lithuania and Russia there is a poor tradition of using external experiences, such as scientists, researchers and consultants, in the process of innovation, development, marketing etc. For the innovation process this seems to be a disadvantage, and in addition scientists and researchers are not used to working as advisors/consultants. Therefore there were two approaches to the projects:

- Train the trainers. A program for consultants and researchers/scientists in innovation
- Business innovation. A program concerning concrete innovation projects based in established companies to improve their innovation skills e.g. by using external sources such as consultants and scientists.
- The program duration was one year, and (the form) varied between:
 - Theoretical training exploring new ways of teaching with interaction, acting and performing
 - Coaching on personal and project level
 - Practical work with implementing of concrete innovation projects and business plans in the participating enterprises called CPT (Challenging Project Technique).

Training was given to both consultants and the company representatives.

In both the two training programs there was a questionnaire based evaluation immediately after training (short term). This has been followed up with a long term (2-3 years after the projects) evaluation based on a questionnaire to business and consultant participants in both projects, and supplied with information from lecturers who were directly participating in the programs.

The short term evaluation showed that the participants in both projects were very satisfied with the content of the courses as well as the way they were conducted. For some participants it was a problem to allocate the needed time for the training and work with the projects. Not surprisingly the most satisfied participants were those with the least language problems and those who participated in all the training.

The long time effect has shown quite some changes. Their approach to innovation and globalization has changed and this has had some positive effect on the bottom line, but not as much as expected after the short terms evaluation. For consultants the training has been useful, but more in relation to personnel development than in consulting skills. The main result related to cross culture innovation shows, that it's not the national barrier that causes difficulties (Denmark-Lithuania/Denmark-Russia), but more local barriers such as:

- Infrastructure. Problems to meet on time if you are not from the same area
- Organization. If there is no acceptance from top level in the organization, innovation is difficult to implement

- Time. Innovation does not become a success unless the participants are devoted to it.

Both projects show that it is possible to implement innovation and innovation skills into a new area with different traditions and culture, but it has to be staged in the right way.

Background for the project

Around the Baltic Sea there is a new growth area in Europe described in the Business magazine, Jyllands Posten June 19, 2005 as the "Yellow Banana". This area is in the periphery of Europe consisting of small countries from Ireland to south of England, the Netherlands to the countries around the Baltic with Denmark, Sweden, Finland and the Baltic Countries. The Scandinavian, Baltic and Anglo-Saxon countries have in the last years had a higher economical growth than the

old dynamic areas in Europe, called "Blue Banana" with Germany, France and Italy (World Economic Forum, 2005). The economical growth in % in 2004 was (selected countries):

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The traditional industry in Europe has changed and a new area of dynamic countries has appeared. In the Nordic Countries the dynamics is focused on innovation, high technology and new services whereas the development in the Baltic has been focused on production. It might be possible to implement some of the driving forces present in countries like Denmark in more production oriented areas.

The Danish Technological Institute is located in Denmark and Sweden. DTI was founded in 1906 by the Danish SME Federation as a resource centre for the emerging small industries sector in the country. Originally, the institute focused on HRD and vocational training of enterprise owners, artisans, and skilled workers, but gradually, services in strategic and operational management, innovation, product development, productivity and R&D were added. DTI is an independent, not-for-profit institution approved by the Danish authorities to provide technological services to businesses and the community, and is the largest supplier of new technology and systems to mainly SME's in Denmark. On the basis of Danish knowledge and experience a project on how to improve innovation skills was implemented in Lithuania in 2003/2004 which was just before Lithuania joined the EU. Lithuania is the largest of the three Baltic countries with a population of 3.4 million. On March 11, 1990, Lithuania became the first Soviet republic to declare its renewed independence,

and on May 1, 2004, Lithuania joined the European Union. Lithuania was along with other Eastern European countries facing a serious challenge consolidating its economy after years of reforms. At the same time, strengthening Lithuania's ties to the European Union demanded a focused strategy, building the national welfare on an innovative and expanding market economy. Lithuania inherited strong research potential and facilities from the USSR. Major players in the system were universities and research institutes. But, despite strong potential, the innovation chain from research and development (R&D) to market success was not strong enough due to decades of centrally planned economy.

A similar project was implemented in Leningrad Oblast, Russia in 2005. Both projects were partly financed by the National Agency for Enterprise and Housing, Ministry of Economic and Business Affairs, Denmark, and presented in theory and practice by the Danish Technological Institute. Both projects were based on strong local partnership – in Lithuania the project took place in Vilnius and was named SINO (Support to the Innovation Structure in Lithuania), in Russia it was based in St. Petersburg and was named SISLO (Support to the Innovation System in Leningrad Oblast).

Leningrad Oblast is a federal subject of Russia (an oblast) established on August 1, 1927. Leningrad Oblast borders the EU towards Estonia and Finland, has a population of almost two million, and surrounds St. Petersburg with a population of almost five million people. Leningrad Oblast has to handle the challenges of being the "outskirts" of a metropolis on one side and on the other side, the opportunities related to the geographic position with borders to the EU. As the trade between the EU and Russia will probably only increase in the future, and with the location in Western Europe close to the Baltic Sea, Leningrad Oblast has a good starting point for becoming a bridge between the two markets.

Even though both Lithuania and Leningrad Oblast are a part of the Yellow Banana neither of them have had the same growth as other areas in the Yellow Banana.

Aim of this article

From east to west in the Yellow Banana there are major culturally and historical differences. One of the projects from Lithuania was done in a situation somewhere between the time when the country was a part of USSR and a future time as a member of the EU. The other project from Leningrad Oblast was done in a country with a similar background as being a part of USSR, but not in a position to see the EU as part of the area or as the most important trading partner.

I both Lithuania and Leningrad Oblast the education level is very high, but it seems like the research done at the universities in the area is not transferred into business activities or innovation/concept development in the area. According to Stan Shih Smile-Curve this focus on

production instead of the use of the R&D activities include some problems in the global competition to cause the ratio value added or profit ratios. The "Smile Curve" hypothesis has been advocated since the latter half of the 1990s, and in the 2000s the scope of the hypothesis has grown, not only in Asia. Although the idea of the smile-curve was developed for the personal computers industry, the theory has come to be applied to a broader range of products, and is now used even in reference to the whole manufacturing industry (Kimura 2003).



Based on the experience from two realized projects in Lithuania and Russia, the article will aim to identify practical long term impact of implemented innovation skills and examine the importance of cultural differences in innovation training. Through this discussion, the article will draw out a recommendation for best practice in training and implementation of cross culture innovation.

The projects

In both Lithuania and Russia there is a poor tradition of using external experiences such as scientists, researchers and consultants in the process of innovation, development, marketing etc. For the process of innovation this seems to be a bad approach (Van de Ven et. al. 1989), and in addition scientists and researchers are not used to be working as advisors/consultants. Therefore there were two approaches to the projects:

- Train the trainers. A program for consultants and researchers/scientists in innovation, so they will understand the innovation process and the business approach, and thereby be catalysers for innovation
- Business innovation: A program in concrete projects based in established companies to improve their innovation skills and as a part of that to use external sources such as consultants and scientists.

The program duration was one year. The form varied between:

- Theoretical training explored into new ways of teaching with interaction, acting and performing
- Coaching on personal and project level
- Practical work with implementing of concrete innovation projects and business plans in the participating enterprises called CPT (Challenging Project Technique).

Training was given to both consultants and company representatives. Each project took place in a concrete company with both company representatives and consultant participants, and the projects were coached by DTI. The background and the theoretical approach were similar in the two projects, but the circumstances were different as described in this paper. E.g. was the training conducted in English, but as only a few in Russia were familiar with the language, the training and coaching was done with a translator just as there was a variation in the training intensiveness. The diversity in culture and circumstances is compared to reach a recommendation for best practice.

Methodology of the project

The Danish Technological Institute has for several years worked with supporting and implementing innovation in the Danish industry. The knowledge of DTI was the foundation in both projects as the experiences from Denmark was to be transferred into Lithuania and Russia. The overall goal of the two projects was to bring together visionary parties of the innovation support system and prospective enterprises in a common effort by:

- Establishing a national organisation to support the project and to get national and regional players to participate in the Steering Committee
- Selecting participating persons and enterprises, including deciding the terms of selection
- Developing and implementing the innovation management programme, including training, workshops, and trips to Denmark

- Focussing training and workshops on innovation and entrepreneurship management, creativity tools, technology assessment, risk management, financing, and partnering
- Creating and supporting a strong network between participants
- Disseminating results and experiences throughout the project period

As all the participants were strangers to each other the projects started with creating some kind of trust and confidence. The overall process that followed was based on the CIS model (Jakobsen & Rebsdorf, 2003).

The activities in both projects started with a socialization process to make individual knowledge more collective (Baumard 1999). These activities were concentrated on teamwork activity, knowledge sharing activity and experiences exchange (Hewes 1996). The business cases were based in real companies with representatives from each company with a variation from CEO to project managers. The task was to connect two or three consultants to each business project (Schön 1984, 1987). The consultants participating in the two projects had different background:

- In SINO most of the consultants had a background in the innovation supporting system: A national founded support activity to make Lithuania ready for the EU
- In SISLO most of the consultants had and still have an academic/scientist background as university employed.

As one of the main issues in the project was to provide the business cases with new possibilities and new knowledge, the background for the consultants was not the main focus. Anyway, the differences in background of the consultants gave some problems, as not all could se and understand the meaning of the projects. In addition there was a lack of time for innovation activities, and a lack of focus on each business cases etc.

The companies were on different stages in size and development (Lievegoed & Glasl, 1997), but all of them had an interest in change (Bono 1967). Even though all of the companies had a business case from the beginning, the aim of the projects was to create new possibilities through change in normal thinking (Osborn 1953)

Comparison of SINO and SISLO training

For the analysis or the effect of the SINO and SISLO training it is very important to have a systematic approach to it. The results of the training could be influenced not only by the *training process* itself but also by the participants involved in the training process, *input, internal factors* (trainers, organisers, budget etc.) and *external factors* (country culture, regional culture, culture of individual company/organization).



Systematic approach on the analysis of training

Analysis of training process in SINO and SISLO

Training processes are usually understood as actual delivery of training. When starting to analyse the SINO and SISLO projects it became clear, that the process of delivering training in the projects were quite similar but the results were somewhat different. The training can be divided into three stages: *preparation stage, training stage* and *post training stage*.



Stages in training process

Preparation stage analysis

The preparation stage consists mainly of training promotion and the selection of participants. More time and effort were put into these activities in the SINO project than in the SISLO project. In SINO it took about 4 months while it in SISLO only took less than 2 months. In both projects there were prepared similar promotional material (brochures) in which the training programme was described. In the SINO project two promotional events were organised, where the training programme was presented. The information about the training was distributed through the wide networks of project partners. Due to the limits of budget and time the information about the training in SISLO was distributed mainly to personal contacts.

The selection of participants was based on established criteria. Each applicant had to fill out an application form. There were different application forms and selection criteria for the representatives of business and for the business support organizations.

In both projects the selection criteria and application forms were similar but in SINO there was an additional requirement to know the English language, as the training language used in SINO was English. In the SISLO project there was almost no competition between the participants, while in SINO there were more applicants than demanded which gave some competition especially among the business representatives. Therefore the diversity in size, technology, age and location among the companies were bigger in SINO

Training stage analysis

The total duration of the training stage in the SINO and SISLO projects were very similar (6 months for SINO and 7 for SISLO). The training stage for SINO started in October 2003 and finished in March 2004 (see figure 3). The training stage for SISLO started in April 2005 and finished in October 2005 (see figure 4).

| Training modules SINO 2003-2004 | Oct | Nov | Dec | Jan | Feb | Mar |
|--|-----|-----|-----|-----|-----|-----|
| 1. Management of Innovation/Entrep. (3 days) | | | | | | |
| 2. Creativity Tools & Technology Ass. (3 days) | | | | | | |
| 3 . Risk managem./innovation financ. (3 days) | | | | | | |
| 4 .Partnering and marketing (3 days) | | | | | | |
| Consulting sessions | | | | | | |

| Training modules SISLO 2005 | Apr | May | Jun | Jul | Aug | Sep | Oct |
|--|-----|-----|-----|-----|-----|-----|-----|
| 1. Management of Innovation/Entrep. (3 days) | | | | | | | |
| 2. Creativity Tools & Technology Ass. (3 days) | | | | | | | |
| 3 . Risk managem./innovation financ. (3 days) | | | | | | | |
| 4 .Partnering and marketing (3 days) | | | | | | | |
| Consulting sessions | | | | | | | |

In the SINO project there were no planed training activities in February due to the Christmas holiday. In July and August there were no training activities in the SISLO project due to summer holiday.

The structure of the training is very similar in both projects. In both, the same CPT (Challenging Project Technique) methodology was used for the delivering of training. The main principles of CPT are:

- 1. To divide all the participant into small teams (3-5 persons)
- 2. All teams are to include both business representatives and consultants
- 3. During training each team will work on real business projects
- 4. Facilitating, coaching and advising to each project through consulting session
- 5. To establish competition between teams. The team that presents the best project wins

CPT was organised according to the following standards:

• CPT trainers must be experienced in teaching and have a high level of professional knowledge as well. The trainers must be experienced consultants

- The trainers must be able to focus on the individual participant
- The participants have to describe their project before and during the training period. These cases will be important in the development of knowledge
- CPT consists of training and workshops and the time in between. The training and the workshops must provide the practical tools in order for the participants to work alone or in teams during the whole project period
- In the classroom, the participants must experience theoretical introduction, discussion, and use of own project ideas
- The classroom should be organised as a combination of common sessions and teamwork
- The locations, which are selected for the training sessions, must be able to provide both large and small rooms for teamwork.

The training consisted of four modules. The duration of each module was three days, and the agendas of each module were similar in the SISLO and SINO projects. The major difference in the structure of the training stage was the number of consulting session. In SINO there were two consulting sessions while there was only one in SISLO. Another difference between the SINO and SISLO training was (as mentioned earlier) that in SINO the training was delivered only in English while in SISLO the language was English but was translated into Russian. This caused some problems relating to the language barriers.

Post training stage analysis

In both projects there was no formal organization of post training activities except the field trip for the three winning teams in each project. Nevertheless in the SINO project there was informal post training contacts. It was mainly due to the fact that in SINO the local project partner was the Lithuanian Innovation Centre (LIC). LIC provides innovation support services, so even after the project ended, LIC staff provided some support to the participants, but not as a systematic process. In the SISLO project the local partner was not directly related to the innovation support services, so there was almost no post training activities in SISLO after the field trip.

External factors analysis

The external environment is very important for innovation development. Creativity can be observed only in interrelations as a system made up on three main parts: domain (set of symbolic rules and procedures), field (individuals who act as gate keepers to the domain) and the individual itself (Csikszentmihalyi 1996).

The results of the analysis of the SINO and SISLO projects shows, that the impact of the program for the companies was minimal. After the training some participants said that they no longer could work at the same company, because they had no possibilities to implement the knowledge gained. Some participants left the companies or even the country. The matrix of creativity level and environment for creativity shows that in a case where the environment for the creativity is not suitable, the increase of the creativity level of an employee could bring negative results to the company.



No analysis was made of the environment for the creativity in SINO and SISLO organizations and companies.

Impact of the culture to the training results

Analysis of SINO and SISLO participants shows cultural differences. The differences were clear and was emphasised by the trainers in the filled questionnaires. What were the cultural differences in Lithuanian and in Russia?

Culture can be described as a set of values, norms and behaviour that a certain group of people have in common. According to Weaver (1986) culture is like an iceberg with many layers of culture – some layers "above the water" are what is visible, easy to identify and known, such as surface culture and elements of folk culture (the arts, folk dancing, ways of dressing, food, etc). But it also contents a culture hidden from view below water. This out-of-awareness part of culture has been termed "deep culture" and includes elements such as the definition of sin, concept of justice, work ethic, eye behaviour, definition of insanity, approaches to problem solving, fiscal expression and approach to interpersonal relationships. It is easy to observe behaviour and also to know norms and rules procedures, but for real understanding we have to go deep into the values.



Elements of a culture

The training effects not only norms and behavior but to a certain extend also the values of the participants. For the development of innovation we have to have a certain value system, as to have the "right" behaviour for innovations. SINO and SISLO were oriented towards the development of knowledge and skills but also towards making changes in the value systems. It takes much more effort to make changes in the value systen if the values of a participant is very different from those of the trainers

For the finding of cultural differences between SINO (Lithuania) and SISLO (Russia) we have used the G. Hofstede (Hofstede 1991) four cultural dimensions: Power distance, Uncertainty Avoidance, Individualism, Masculinity. In order to find a cultural dimension which is more favourable to innovation we have compared scores on these dimensions with the Summary on Innovation Index (SII) 2007. SII shows how the country is in favour toward innovation development. There is correlation between the SII and Power distance (-0.54), Uncertainty Avoidance (-0.55), Individualism (0.47), Masculinity (-0.08), So it quite clear that the cultures with less power distance, less uncertainty avoidance and more individualistic are more favourable towards innovations.

| Country | Summary Innovation Index (SII | Power Distance | Uncertainty Avoidance | Individualism | Masculinity |
|---------------------|-------------------------------------|-------------------|--------------------------|---------------|-------------|
| Sweden (SWE) | 0,73 | 31 | 29 | 71 | 5 |
| Finland (FIN) | 0,64 | 33 | 59 | 63 | 26 |
| Denmark (DEN) | 0,61 | 18 | 23 | 74 | 16 |
| Japan (JPN) | 0,60 | 54 | 92 | 46 | 95 |
| Germany (FRG) | 0,59 | 35 | 65 | 67 | 66 |
| Great Britain (GBR) | 0,57 | 35 | 35 | 89 | 66 |
| United States (USA) | 0,55 | 40 | 46 | 91 | 62 |
| Israel (ISR) | 0,50 | 13 | 81 | 54 | 47 |
| Ireland (IRE) | 0,49 | 28 | 35 | 70 | 68 |
| Austria (AUT) | 0,48 | 11 | 70 | 55 | 79 |
| Netherlands (NET) | 0,48 | 38 | 53 | 80 | 14 |
| Belgium (BEL) | 0,47 | 65 | 94 | 75 | 54 |
| France (FRA) | 0,47 | 68 | 86 | 71 | 43 |
| Canada (CAN) | 0,44 | 39 | 48 | 80 | 52 |
| Australia (AUL) | 0,36 | 36 | 51 | 90 | 61 |
| Norway (NOR) | 0,36 | 31 | 50 | 69 | 8 |
| Switzerland (SWI) | 0,35 | 34 | 58 | 68 | 70 |
| Italy (ITA) | 0,33 | 50 | 75 | 76 | 70 |
| Spain (SPA) | 0,31 | 57 | 86 | 51 | 42 |
| Greece (GRE) | 0,26 | 60 | 112 | 35 | 57 |
| Portugal (POR) | 0,25 | 63 | 104 | 27 | 31 |
| Turkey (TUR) | 0,09 | 66 | 85 | 37 | 45 |
| Russia (RUS) | n/a | 90 | 70 | 42 | 37 |
| Lithuania (LIT) | 0.27 | 45* | 67* | 50* | 65* |

Cultural dimentions and Summary on Innovation Index 2007 (SII). * by Baltrimiene, 2007

Based on this data regarding SII the Scandinavian countries are among the leaders. This figure clearly corresponds to the Yellow Banana figure (and forecast). There are no SII from Russia but the cultural dimensions are quite different from the Scandinavian countries:



Diffence in values between Russia and Scandinavian countries

The difference between Lithuania's cultural dimensions compared to Scandinavian countries is smaller than from Russia.

The long terms questionnaire

In both the training programs questionnaire based evaluation was done immediately after training (short term). The long term effects (2-3 years after training) – which is the focus in this article, is based on a questionnaire given to all participants both from companies and consultants. The questionnaire is shown in appendix 1. This is combined with information from lecturers who were directly participating in the trainings. The result from the lectures is shown in appendix 2.

The questionnaire was send or emailed to the participants, and was followed by a phone call. In Russia the questionnaire was translated into Russian to make sure they were able to understand it. There is a major difference between Lithuania and Russia, whereas almost everyone had computer and internet access in Lithuania this is not the case in Russia: Even by phone it can be quite difficult to contact people in Russia, as telephone numbers often change, people move etc. Especially in Russia this logistic gab makes it difficult to get in contact with the participants even during the project, which is considered to be the main reason for the low percentage responds. In Lithuania all 28 persons contacted promised to respond, but still 10 have not answered.

| Respons | SINO | | SISLO |) |
|---|------|------|-------|------|
| | n | % | n | % |
| Total number of project participants | 33 | 100% | 35 | 100% |
| Persons who followed training | 33 | 100% | 29 | 83% |
| Number of contacted persons | 28 | | 12 | |
| | | | | |
| Number of answered questionnaires | 18 | | 11 | |
| % answer of contacted | | 64% | | 92% |
| % answer of persons who folloved project | | 64% | | 38% |
| | | | | |
| Those who were not contacted, reasons: | | | | |
| - Change of jobs, no tracks found | 2 | | 5 | |
| - Could not be found by address, email or phone | | | 10 | |
| - Had left the country | 1 | | | |
| - Ill | | | 1 | |
| - Died | | | 1 | |
| - Maternity leave | 2 | | | |

Main results

The short term evaluation showed that participants in both projects were very satisfied with the content of the courses as well as the way they are conducted. The quality of the trainers and the communication with them were highly evaluated by the participants, as well as the activities and presentations enabling discussions and team work with real life examples. For some participants it was a problem to allocate the needed time for the training and work with the projects. Not surprisingly the most satisfied participants were those with least language problems and those who participated in all the training. As one of the major differences in the two projects was differences in languages it seems like:

- In SINO everything was carried out in English, which made the teaching more effective and the dialog more direct. However not all of the participants was totally familiar with English and as the teacher doesn't have English as native language, some of the participants misunderstood or didn't understand some of the teaching and coaching.
- In SISLO everything was carried out in English, and thereafter translated into Russian. All presentations were done in both English and Russian, and even though this is very time-consuming and makes it difficult to have direct conversation between participants and teachers, misunderstandings caused by languages barrier were minimized.

The long term effect has shown quite some changes, especially in the companies. Their approach to innovation and globalization has changed and this has had a positive effect on the bottom line. For consultants the training have been useful, but more in relation to personnel development than in consulting skills.

| Average of the responded questionnaire | SINO proje | ct | SISLO project | | |
|---|------------|-------------|---------------|-------------|--|
| | All busi- | All consul- | All busi- | All consul- | |
| | ness | tants | ness | tants | |
| Responsers (n) | 6 | 12 | 6 | 5 | |
| Number of employees in company (Average of number | | | | | |
| of employees) | 153 | 95 | 90 | 83 | |
| Age (Average of years) | 38 | 35 | 58 | 47 | |
| Percentage still in same company | 83% | 92% | 67% | 100% | |
| Avarage: 1 is no, 10 is very much: | | | | | |
| Would you recommend training to colleagues? | 8,8 | 9,2 | 9,2 | 10,0 | |
| Positive impact on your carrier? | 5,3 | 6,8 | 5,0 | 5,0 | |
| Positive impact on your personal life? | 7,6 | 7,0 | 5,3 | 6,4 | |
| Positive impact on your income? | 3,8 | 5,2 | 3,7 | 3,8 | |
| How positive was the impact of the | | | | | |
| training of the innovation activities? | 7,0 | 5,9 | 5,8 | 4,3 | |
| Did you have possibility to implement knowledge | | | | | |
| received during the training in your company? | 7,7 | 6,4 | 4,0 | 6,8 | |
| Increase of numbers of employees | 2,0 | 4,3 | 1,5 | 2,7 | |
| Increase of turnover | 3,0 | 6,0 | 1,7 | 2,3 | |
| Increase of profit | 2,8 | 2,0 | 2,0 | 3,5 | |
| Increase of innovation culture | 4,5 | 7,3 | 6,0 | 5,0 | |
| Increase of budget for innovation development | 3,5 | 7,5 | 4,8 | 4,0 | |
| Increase of export activity | 3,0 | | 5,0 | | |
| How often do you communicate with the other | | | | | |
| participants from the training? What impact had the participation at the training on | 4,8 | 5,5 | 2,5 | 3,0 | |
| establishing new contacts? | 4,2 | 7,6 | 4,6 | 6,2 | |
| Would you like to meet other participants more often? | 8,6 | 7,9 | 6,0 | 7,8 | |
| Average of the result from the questionnaire | | | | | |

Even though the two projects where very similar there are some differences in the impact. This primarily concerns the results on the personal level. It seems that the SINO project had a bigger impact on the personal development and the networking among participants was also considerably stronger. This might have something to do with age (the participant in SINO were younger than in SISLO), the time spend together both between participants and teachers (sessions was longer) and language barriers (in SINO there was a common language).

Although the project in most of the companies in both countries has changed the innovation culture, the impact has been higher in SISLO: One of the projects was even the local winner of an innovation competition a year after SISLO ended. Surprisingly it was found in both projects, that the internal influences of the "innovation culture" and the focus on innovation with an "increase of budget for innovation development" have had a much higher impact than the "average increase of turnover" or "numbers of employees." The projects influences are considered as being big, but it has not had a great effect on the button line. This is not a general trend, as the questionnaire shows major differences:

- In SINO one participant who was a project manager, came from a company with more than 500 employed. He had considerably problems in getting the ideas from the project implemented in the company, as they were not easily transferable.
- Two other cases in SINO showed much more success. Even though the companies were smaller, the participants were the CEO/owner, and the projects resulted in major increase in turnover, export activities and culture change.

In average of all questions it seems like the consultants have benefited more from the project than the business representatives, and the general impact was higher in SINO than in SISLO



Average of the score for all area

Both projects show that it is possible to implement innovation and innovation skills into a new area with different traditions and culture. The main result is:

- Participant's willingness to spend time on the project have a major influences on the result
- The possibilities for staging each activity have a major influence. This both involve staging the teaching and the change management of the projects
- Language problems can be a considerable barrier, but seems to be able to overcome
- Confidence and trust between lecturers and participants is a crucial factor for the success, not only of the trainings, but also in the coaching process. Non formal communication between lecturers and participants is very important for establishing trust and confidence
- Culture differences do not necessarily have to be a barrier it can be an advantage both between teachers and participants and between the different participants.
- CPT (Challenging Project Technique) is a good basis for improving innovation skills. The combination with teaching and doing a project together with participants is a god way if there is a local follow-up on the activities
- Not surprisingly the project based on participation from the top level of management was most successful, but only when the group worked well and was devoted to the project.

Discussion

It seems like culture differences even by introducing play (Schrage 1999) as a part of the teaching and learning system (Kolb 1984) do not make considerably barriers for implementing innovation thinking if the training involves long terms duration of teaching and interaction. Also it seems like language barriers are a problem, but not an impossible barrier to overcome.

Local barriers seem much more significant:

- Level of authorization for participants in the project mainly among business participants. Does each member have any authorization to carry the projects from idea to success in the company?
- Logistic is it possible at all to work in an area with different partners, or makes simple logistic problem it impossible to meet/work and innovate together?
- Time and focus. A project not offered enough focus doesn't have any chance to become a success, and as other projects become more important it's impossible to reach a result
- Time between meetings/workshop is not spend on each project as other activities have higher priority. To work between session and meetings is one of the most important factors in the CPT, but in practice this was difficult.

The activities *before*, *under* and *after* shows that there was different problems and possibilities to handle

Before

Age, education and background did not show any major barrier, but simply things like logistic (chance to meet), communication possibilities (internet, phone etc.) and position in company (CEO, manager etc) introduced considerable problems for establishing well functioning groups. These conditions are not known as problems from similar projects conducted in Denmark.

A part of the CPT training were based on business cases with both a real case and representatives from the company, but it seemed like some projects, both on personal and on professional level, had a much higher output of the program than others. These companies were characterized by:

- Company representatives had direct access to carry out the innovation e.g. as CEO, owner or highly trusted employee
- There was more than one person from the company involved in the project
- The company was not in boundless economical or financial problems
- The representatives followed the process and tried to implement the possibilities and thinking into new products or businesses
- The company was willing to use the related consultants

For the consultants the outcome was also based on some specific circumstances:

- Those consultants devoted to both the SINO/SISLO project AND to the business case gained most effect both personal and professional. Time was seldom used as an excuse for not meeting, not doing the homework and not participating in training
- Those business cases, where business representatives and consultants had a perfect chemistry was both among the winning teams and were the most satisfied
- Those consultants who both had the knowledge and interest in the business case achieved the most, both related to the business case and to own satisfaction

The preparation of the project had a major impact on the process that followed:

- In SINO this was done more systematically to ensure commitment to the SINO project, and of 10 started business cases 10 made a business plan to be evaluated. Also even three years after the project, more than half of the consultant answered the questionnaire.
- In SISLO it was more difficult to get both companies and consultants to participate, and three of the business cases stopped during the project as the companies had economical problems. Also only 25% of the consultant responded to the questionnaire. Those who followed SISLO seem on the other hand to be very successful even though the average might have been different if the rest had answered.

Many of the participants consider lack of money and lack of time as the main barrier.

During the project

Both projects were completed as described with a reciprocal between an active position of trainers that required response and participation from the participants and CPT, where real project were done by using the learned technique. This way of conducting a project gave a very good evaluation of both projects immediately after the projects ended (short terms) and even the long terms evaluation shows that participants remember and still recommend the projects and form.

The major problem during the project was related to the CPT: Between the different session in the projects - and between the meeting between teachers and participants in each business projects, many activities was stopped or interrupted by other activities considered more important. A continued follow-up was difficult for the local project managers, as logistic was a barrier.

After the project

After the project and the field study for the winning projects, the follow-up and inspiration stopped, and the project activities ebbed away. There was no 2. step or any plan for continuation. The short

terms evaluation show high satisfaction with the project and the way the projects was completed. In both SINO and SISLO there were three winning teams, and all participants in each of the winning teams had a field study trip to Denmark. The field study included meeting with different Danish and international companies and knowledge institutions. The basic for creating networks, for explore the created ideas and for carry on were perfect, but as the project and the systematic follow-up stopped, it seems like most of the ideas after a while simply ended.

Recommendation

As for the process of during cross culture innovation, differences in culture seem to be of minor influences *if* the training is stages properly. The stages should include following recommendation:

- The participants should be devoted to the project
- The preparation and post training stages are very important for the success of the training. More attention and time should be given to the promotion of the training and selection of motivated participants
- Many following activities are needed to keep the interest focused
- Each activity have to last for more than a few hours preferable several days to ensure relations between participants are created
- Involve local trainers to reduce the language barrier
- Training should be done by experienced trainers who have empirical knowledge from their own country that they are able to share. This serious approach with equality from trainers infect the knowledge sharing and the direct consequence is more devoted participants in both the training and the projects
- Business cases have to be relevant both for the project and for the company, with top level focus in the company
- Top level participation or decision making level, preferable with more than one participants from each company
- The CPT with combination of interactive training followed by real projects seems to be a very successful method
- Local anchoring with commitment is crucial for the maintaining of results and continuation of the development of an innovation culture
- Follow-up project should always be included in this type of project
- The inclusion of competition can be a way to ensure commitment
- An innovation project like SINO and SISLO is not the answer for companies in economical or financial problems

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Appendix 1

Questions on results of the SINO/SISLO training

| 1. Name of company (during your participation in training): |
|---|
| 2. Your position in the company (during your participation in training): |
| 3. Date of establishing of the company: |
| 4. Number of employees <i>(please mark):</i> <10 [10-25 [25-50 [50-100 [100-250 [250-500 [>250] |
| 5. Company main activity: |
| 6. Your age <i>(please mark):</i> <30 30-40 40-50 50-60 >60 |
| 7. Your education: |
| 8. Would you recommend the SINO/SISLO training to your collegues? 0 1 2 3 4 5 6 7 8 9 10 (please mark 0 -don't know 1- no 10 - very much) |
| 9. Why ? (please briefly describe) |
| 10. Are you still working in the same company? Yes 🗌 No 🗍 Other: |
| 11. What changes positive or negative happened related to the training ? (please briefly describe) |
| The what changes positive of negative happened related to the training . (produce briefly describe) |
| 12. Could you please indicate quantitativly impact of the training to you personally? |
| |
| Positive impact on your carrier? |
| |
| Positive impact to other activity (please specify) |
| 13. Please briefly describe status of the innovation plan developed during the training ? |
| 14. What main obstacle were for implementation of the innovation plan? |
| 15. How positive was an impact of the training to your innovation project ? 0 1 2 3 4 5 6 7 8 9 10 (please mark 0 –don't know 1- no 10 - very much) |
| |

16. Could you please indicate quantitativly impact of the training to your company? (please mark 0 - don't know 1- no 10 - very much)

| | | | If possible put fix nume |
|---|---|----------------------|--------------------------|
| | 0 | 1 2 3 4 5 6 7 8 9 10 | Before N |
| Did you have possibility to implement knowledge received during the training in your company? | | | |

| Increase of number of employees | |
|--|--|
| Increase of turnover | |
| Increase of profit | |
| Increase of innovation culture (openness, flexibility and etc) | |
| Increase of budget for innovation development | |
| Increase of export activity | |
| Other (please | |
| specify): | |

17. Could you please indicate status of existing communication between other perticipants ? (please mark 0 - don't know 1- no 10 - very much)

| | 0 | 1 2 3 4 5 6 7 8 9 10 |
|--|---|----------------------|
| How often you communicate with the other participants of the | | |
| training? | | |
| What impact to the establishing new contacts was due to the | | |
| participation at the training ? | | |
| Would you like to meet other participants more often ? | | |

18. Please briefly describe status of communication (why you meeting/ not meeting/ to whom, how it is useful etc.)

19. Please briefly describe what of the knowledge you still use received during the training?

20. Please briefly describe what knowledge you lack for innovation development?

21. Please briefly describe ideas how you would improve training on innovation/ other comments?

THANK YOU !!!

Appendix 2

Analysis of responds from trainers

The analysis is based on the responds of 5 trainers participated in both SINO and SISLO training. According to the trainers SINO project was more successful than SISLO. On the scale of 10, SINO project got maximum 10 points (very successful) while SISLO got 6 points (satisfactory).

The reasons mentioned by the trainers why SINO project was evaluated as very successful are the following: in SINO almost all participants followed to "the very end, high level of participation; all participants achieved considerable personal development; all participants companies had ideas developed and implementation plans made; cooperation between participants continued after the training; intensity of the program was phenomenal, and the participants were either highly educated or highly motivated and eager to learn, and extremely open; the combination of creativity and competition drove the participants to great results.

The reasons mentioned by the trainers why SISLO project was evaluated as satisfactory are: in SISLO were "lost" some of the participants – but those who followed was successful; the level of participation in the training was only 60- 70 %, only 6 innovation plans was developed out of 10 started; some of the participants were not very open, or willing to open up.

The main factors most important for the success of the training identified by the trainers are: practical experience of the trainers, working with the real cases, good structure of training programme, good translation (if required) (see figure 1). According to the trainers to understand the cultural differences of the participants is not very important.



1 figure Importance of factors for success of the training (1- not important, 10- very important)

Lithuanian culture for the innovation based on SINO project experience

| Positive factors | Negative factors |
|--|--|
| Openness, willing to learn, willing to | Inherited social attitude, too many |
| change, Eager for feedback, creative, | opportunities = less patience. The |
| Entrepreneurial, open minded, intelligent, | infrastructure doesn't stimulate |
| youthful, people really want to do | innovation, R&D from universities is not |
| something, believe in future, innovation | a part of company skills. |
| is a part of short term history – easy to | |
| talk about. | |

| Russian | culture | for the | innovation | hased on | SISLO | nroiect . | exnerience |
|---------|---------|---------|------------|----------|-------|-----------|------------|
| Massian | Chinne | joi ine | innovanon | buseu on | SISLO | | слрененсе |

| Positive factors | Negative factors |
|---|--|
| Good educational background, willing to | Inherited social attitude, unwilling to |
| learn, history for science, strong research | change, less openness, proundness, |
| history, intelligent | unwillingness to adapt, the infrastructure |
| | doesn't stimulate innovation. Even there |
| | is high level knowledge at universities it |
| | seems like there is a long way to |
| | companies, difficult to make focus. |

Danish culture for the innovation based on general experience

| Positive factors | Negative factors |
|--|---|
| Good educational background, willing to | Lack of time for reflection, difficult to |
| learn, willing to change, business | use enough time on each project – |
| acumen, creativity, open minded, | become often meetings instead of |
| intelligent, Entrepreneurial, it have been | facilitation/ coaching |
| tried before syndrome. | |