BUSINESS ACADEMY AARHUS
UNIVERSITY OF APPLIED SCIENCES

The Experts in Teams' Chronicle

Output from the 2nd Its21 seminar

Experts in Teams - today, tomorrow, together
1-2 June 2016

#eit16

NORDPLUS

Acknowledgements

We wish to thank Nordplus Horizontal that has provided funding for the seminar. The Nordplus programs offer financial support to a variety of educational cooperation between partners in the area of lifelong learning from the eight participating countries in the Baltic and Nordic regions. Read more at nordplusonline.org.

We also wish to thank all participants, moderators, students and disruptors at the seminar. You have contributed with invaluable knowledge of interdisciplinary teamwork in a contemporary context. A special thanks to students from BAAA and NTNU who made summaries of workshops and disruptions and made role plays at the post-seminar.

Bjørn Sortland and Are Holen and their team at NTNU also deserve a big 'thank you' since you have generously shared information, experience and learning material from the EIT work. A small part of this work is summarized in the chronicle.

Finally, thank you to the project and logistics team at BAAA for the contribution to the seminar.

Aarhus, June 1, 2016

Abbreviations:
BAAA: Business Academy Aarhus
EIT: Experts in Teams
NTNU: The Norwegian University of Science & Technology
SDU: The University of Southern Denmark

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Introduction

Business Academy Aarhus is pleased to welcome you to the 2nd Its21 seminar: Experts in Teams – today, tomorrow, together.

The seminar continues the work with interdisciplinary teamwork skills for the 21st Century.

The seminar is an activity of the Experts in Teams (EIT) Network where partners from Norway, Sweden and Denmark collaborate on developing the EIT Method even further.

The EIT Method offers a unique framework in which students can practice collaboration across professional backgrounds.

To be able to collaborate across disciplines is a core competence today. The competence is in high demand from companies worldwide. The EIT Method enables students as future employees to inculcate this competence.

The seminar offers a variety of disruptions and presentations where the EIT competence is put into perspective.

Hopefully the seminar will inspire you to continue to work with the EIT Method at a local, regional and international level.

The Experts in Teams' Chronicle 2016 has two purposes. It offers the opportunity for you to get a brief introduction to the EIT Method. If you need further information about the EIT Method, you should consult ntnu.edu/EIT or baaa.dk/EIT.

Furthermore, the chronicle gathers summaries from the disruptions, presentations and workshops. After the seminar, you will therefore receive the updated version of the chronicle.

One task of the network is to create an organizing vision for the EIT Network. This topic will be a continuous theme at the seminar.

The inputs from disruptors, presenters and interdisciplinary teams are valuable in the creation of an organizing vision for the EIT Network.

Welcome to the seminar.

Ulla Haahr
Project Portfolio Manager & EIT responsible
The Research & Innovation department
Business Academy Aarhus

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The value of putting together a diverse team –

and then using this diversity – is

insanely important.

Flemming Horn Nielsen, Director, Dong Energy, oil and gas activities, 10 February 2016.

What did we learn?

During the seminar a number of companies and universities put the EIT Method into perspective. In general, the main conclusion is that the competences that students gain from EIT are highly needed and demanded in today's labor market.

Lego and Danske Bank organizes their development processes in interdisciplinary teams. And these companies stressed the importance of continuing the development of the EIT Method. There are many examples of companies who use facilitation (in some companies called coaching) in interdisciplinary teams and teams in general and this supports one of the basic ideas of the EIT Method.

Turning to a further development of the EIT Method, it is vital that the Scandinavian EIT Network rethink the way knowledge about the method is disseminated. There is still a need for a stronger vision that can support the implementation of the EIT Method at more education institutions.

There is also a need for more story telling; good examples of how students have been offered their dream job due to their intercultural competencies. And how do public and private organizations utilize interdisciplinary competences today? What is the value of facilitating instead of using classical project management tools? How can reflection and evaluation of own behavior in teams create value and strengthen the team? Such issues should be highlighted in the further communication about EIT.

Regarding the implementation of the EIT Method; the founding fathers from NTNU in Trondheim told the history of how NTNU has been developed and implemented at NTNU. It has been a long process lasting more than 10 years with many challenges. This tells us that the implementation of EIT as across departments or faculties is a very challenging task. However, there are examples from NTNU, SDU and BAAA where EIT has been implemented and today is part of curricula. So these institutions play an important role in showing how they have handled the implementation of EIT.

The seminar had a workshop where participants worked with group dynamics and facilitation and this workshop was continued in a post-seminar. These workshops made it clear that facilitation is a very difficult task and that some (or many) lecturers find it difficult to facilitate students. And some lecturers expressed that they even felt uncomfortable with this role. So how can the EIT Network contribute to a further education of lecturers? What kind of learning material is need for such an effort? And how can the EIT Network unfold this across Scandinavia?

The seminar in Aarhus has stressed a need for the work taking place in the EIT Network in order to develop the different areas related to ITS21 – Interdisciplinary Teamwork Skills for the 21st Century further.

Until then the focal areas of the network is, among other things, the following:

- Dissemination of knowledge and experiences regarding the implementation of the EIT Method locally.
- Development of learning material for facilitators (lecturers and senior students who are co-facilitators)
- Development of facilitation courses for lecturers across Scandinavia.

We look forward to seeing you at the next seminar in Uppsala in 2017 where these important issues will be discussed and put into.

The EIT Network

The current seminar is an activity of the EIT Network.

The partners of the network are:

- NTNU, Trondheim
- University of Bergen
- Bergen University College
- The Norwegian Confederation of Trade Unions (LO)
- Lund University
- Uppsala University
- The University of Southern Denmark
- DTU Diplom – Applied Engineering Education, Ballerup, Denmark
- Danish Technological Institute, Aarhus
- Aarhus Tech, Vocational Education & Training
- Aarhus Business College
- The Foundation for Muscular Dystrophy, Aarhus
- BAAA

The aim of the network

The aim of the EIT Network is manifold.

First of all, the network wishes to disseminate knowledge of the EIT Method as it is practiced at NTNU.

Second of all, the aim of the EIT Network is to collaborate on the development of new tools which can support a further implementation of the EIT Method at educational institutions worldwide. At the moment, the EIT Network works on academic and practitioner papers, learning material, learning arenas for facilitators and lecturers, joint education programs, and a 3rd and 4th Its21 seminar in 2017 and 2018.

Did you know that…

The EIT Method originates from NTNU where it has been part of curricula for +10 years.

Read more: ntnu.edu/eit.

The EIT Method

The EIT Method is based on experiential learning and it provides students with a unique interdisciplinary competence. The meaning of EIT is twofold.

The individual team member needs to explore how his/her own actions and practices affect the collaboration of the team. **In this way the individual team member becomes an expert in teamwork.**

The individual team member also needs to practice how he/she can activate own skills and competences in the team. **Through this the team member becomes an expert within the team.**

In the EIT Network we have discussed how we should label the Experts in Teams competence. This is important since students should be able to describe this specific competence and include this experience in their CVs.

Furthermore, it is important that educational institutions have a detailed understanding of the competence in order to be able to implement it in curricula.
One way to depict the competence is shown in the figure below.

The center circle represents a student's core mono-disciplinary competence. The outer circle represents the student's **interdisciplinary competence.**

One could argue, that the EIT competence is an add-on to students' core competence. No matter the view on this, it is very important for students to be able to describe the competence to future employers.

Furthermore, it is interesting to explore how the two competence levels can be conflated. This may be a future task of the EIT Network.

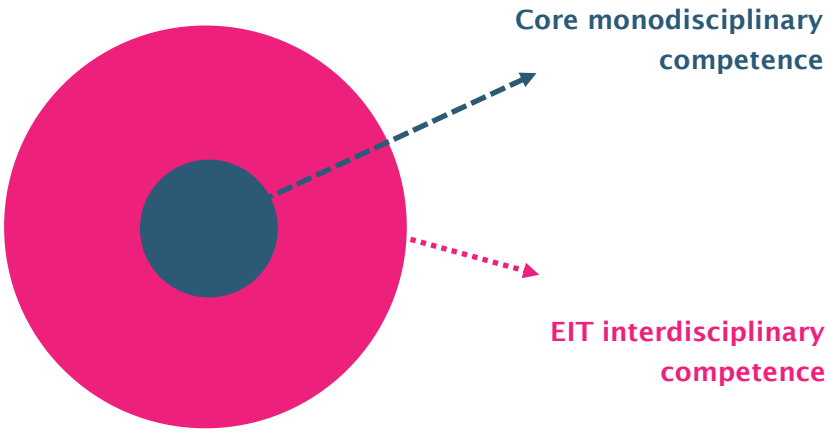


Figure 1: Competence Delineation, Ulla Haahr, 2016.

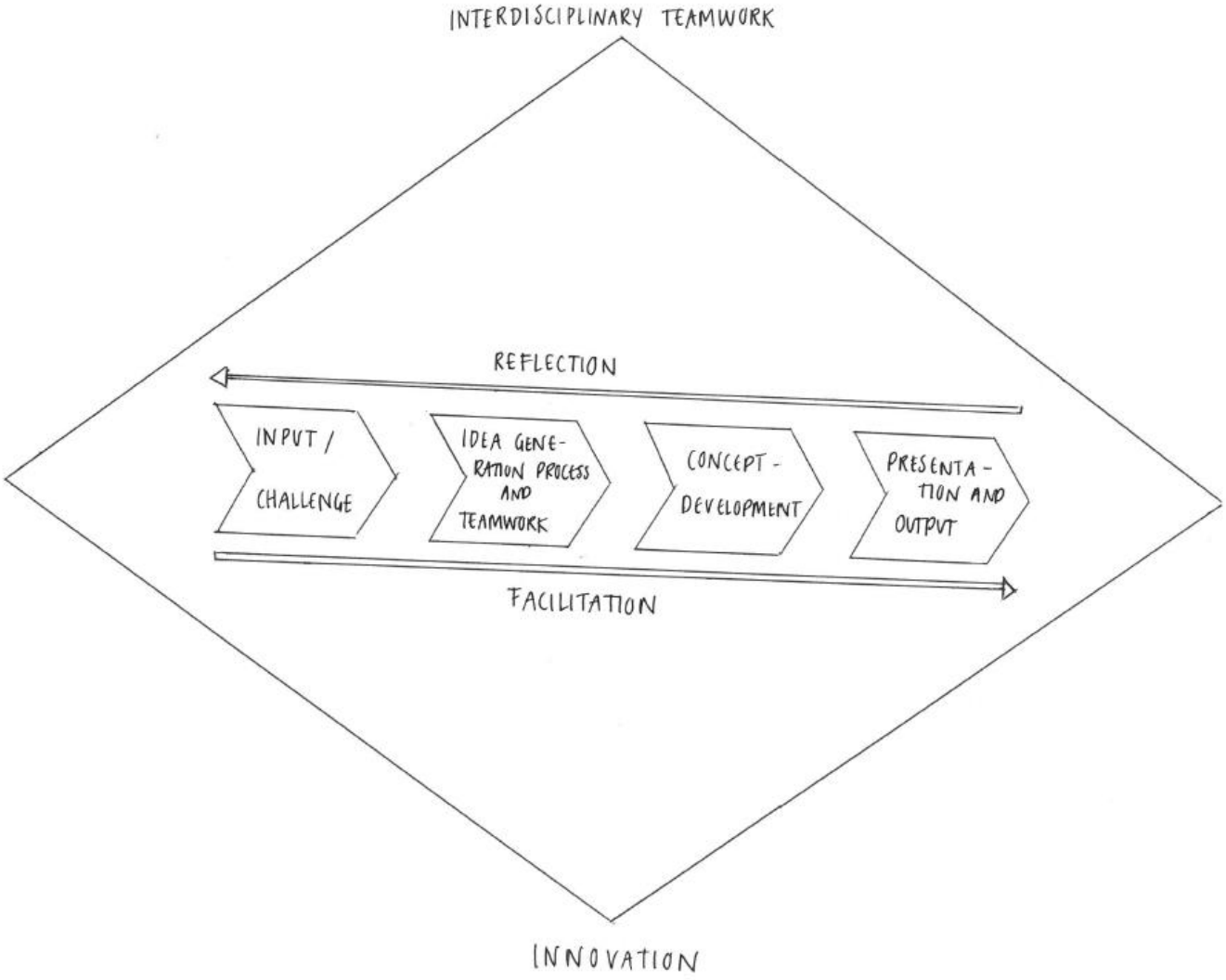


Figure 2: Illustration of the EIT process, BAAA, Lisa Nygaard, 2016

EIT process at BAAA

When students engage in the EIT process, there are many different exercises, main and sub-processes. The EIT process at BAAA involves the steps shown below. Most processes have an iterative nature with more than one loop involving each step.

Compared to other innovation processes, there are some major differences. Firstly, a facilitator should monitor the process and intervene when needed. Furthermore, the facilitator should be able to adjourn conflicts in the team and contribute to the effectuation of exercises and processes of self-reflection and feedback in the team.

BAAA has held EIT courses in 2013, 2014 and 2015 and 2016.

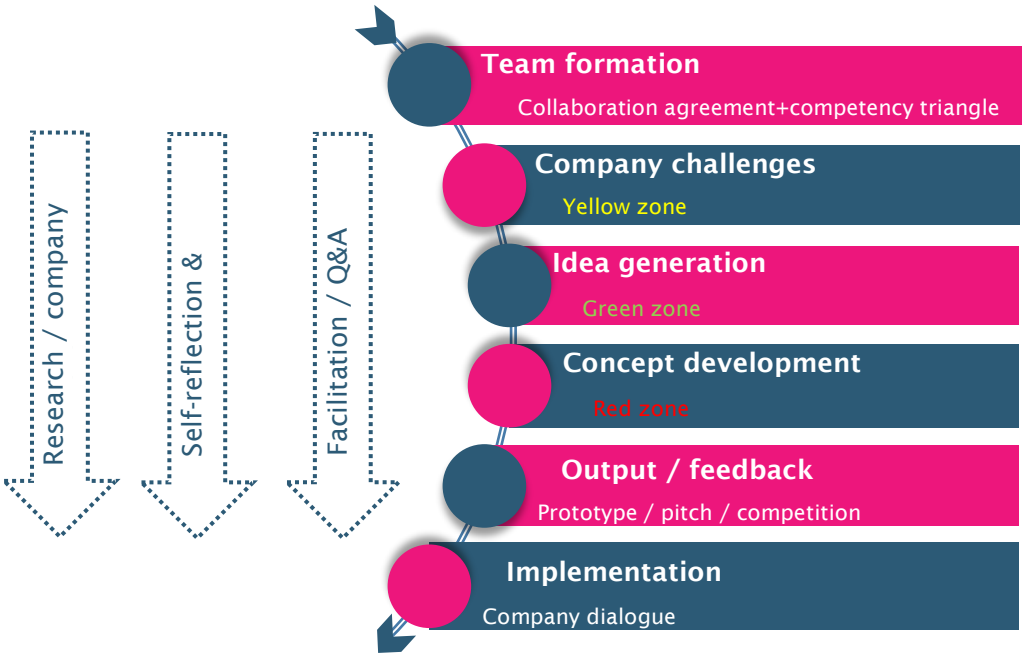


Figure 3: EIT Process at BAAA, Ulla Haahr, 2016.

EIT tools & exercises

In the following section, a few of the EIT exercises and tools are presented. The exercises and tools derive from NTNU (competency triangle, self-reflection and facilitation) and BAAA (idea generation).

The competency triangle

The aim of using the competency triangle is that the interdisciplinary team becomes aware of the team's total pool of competences. The use of the competency triangle furthermore adds a better understanding and overview of the competences of the individual team member. This overview enables the team to organize and delegate tasks within the team.

The competency triangle incorporates three different types of competences – the personal skills, theoretical background and work experience. This exercise includes a process where the team should reflect upon the pool of competencies and the competences of the individual team member. This may be followed by a session where the team considers what types of tasks that are suitable for the individual team members.

The exercise in conducted in the beginning of the EIT process. In later processes, the competency triangle can be used as a reference tool.

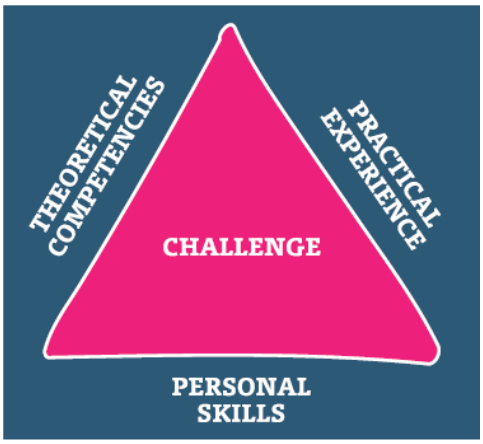


Figure 4: The Competency Triangle, NTNU, 2016

Idea generation
At BAAA the EIT Method is coupled with innovative processes with a focus on both output and process. Therefore, idea generation and related entrepreneurial aspects are included in BAAA's EIT courses.

The purpose of the yellow, green and red zone exercise is to give students a tool for a structured idea generation process. Each zone has different ground rules, and the students can switch between the zones depending on the result of the different processes. Hence, some teams move back and forth between the zones.

Yellow zone	**Define the problem** The purpose of the yellow zone is to build a common understanding of the company challenge within the team. It is important that all team members have a say since you have different educational backgrounds and therefore may understand the challenge very differently. Formulate the task as a 'how'-question – this opens up for creativity. Attempt to formulate the task in several ways – seen from different angels.
Green zone	**The creative zone where everything is possible** The purpose of the green zone is to get as many crazy, wild and diverse ideas as possible. The process is initiated by an 'empty-your-head' exercise. Everyone in the team is positive to each proposal. The word 'no' does not exist. Criticism and judgement is not allowed. All suggestions are welcome. Think quantity over quality. Quirky ideas are welcome, and you can further develop ideas of others.
Red zone	**The critical zone for sorting and assessment** The purpose of the red zone is to sort, combine, refine and choose the best idea. All ideas from the green zone are collected together and critically analyzed and evaluated. Ideas may be merged together, or you may find new, exciting combinations. By the time the red zone is completed you will be left with one idea, which you can continue working on.

Table 1: Idea Generation Process, BAAA, Centre for Entrepreneurship, 2013.

Self-reflection

A very important part of EIT is the students' ability to make self-reflections in the team. This may be a difficult task for many. However, it supports the development of the teamwork and it makes the student aware of team dynamics. The reflection exercise stresses the experiential learning aspects of EIT since students should build on their ongoing experiences in the team. The students' make notes in own words. The reflections can be shared within the team after consent from the team members. BAAA encourages the students to use the illustration below for inspiration to note their personal reflections.

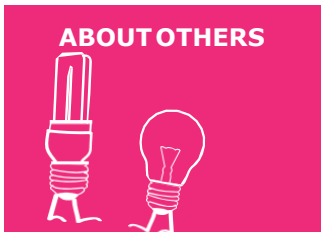
	*How do you contribute to the team's collaboration? What is your role? How do you feel about this particular role? Note one example where you contributed positively to the team-work – and one example where your role had a less fortu-nate impact on the team.*
	*Are there any team members who boost your work or the teamwork in general? How? Are there any team members who hinder your work or the teamwork in general? How? Note the roles of the other team members and how these roles differ from your own role.*
	*How does the team function in general? What are the strengths and weaknesses of the team? What works well and what doesn't work so well?*

Table 2: Self-reflection, NTNU, Are Holen, 2016. (reformulated by BAAA)

Facilitation

Another important part of the EIT Method is the facilitation of the interdisciplinary teams. The aim of facilitation in the EIT process is to help team members reflect upon the dynamics of the team. In this way students become aware of the team dynamics and their own behavior in the team. Hence, the facilitators help the teams to focus on aspects which can be altered in order to enhance the teamwork of the team.

Usually it is the very experienced lecturers who become facilitator in the EIT processes. An important issue is the difference between being a facilitator compared to a lecturer. A facilitator should not be an expert who gives specific directions to the team or one who supplies the students with answers to specific questions in the process. Instead the facilitator should ask open questions and the right questions at the right time, so to speak. The facilitator should also be able to observe the team and intervene in teams that seem to be exposed to conflict.

The facilitator should look for different aspects/dynamics related to team/group dynamics – the dimensions are depicted on the next page.

At BAAA there are also facilitators who are senior students studying the elective subject 'The skilled facilitator'. In this way these students get a unique insight into the facilitation discipline. Lecturers support the students during the innovation days with facilitation and academic knowledge.

NTNU (Are Holen, Hanne Charlotte Helgesen and Sven Veine) held a post-seminar 2 – 3 June 2016 with focus on group dynamics and facilitation. The post-seminar is described and summarized later in the catalogue.

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To facilitate is to ask questions that I do not have the answers for. Humble inquiry is the most reliable way to test or build a relationship of trust.

Edgar H. Schein, 2013.

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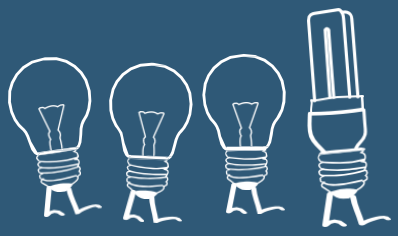
PARTICIPATION

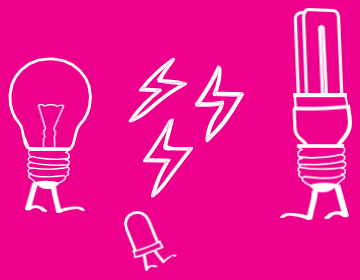


Is everyone participating in the discussion? Is one person doing all the talking?

WELL-BEING

How open is the team? Is anything preventing openness?

CONFLICTS

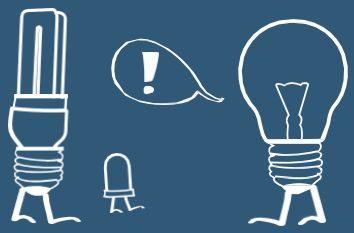


Are there any conflicts or tensions in the team?

PROCESS

Is the process structured or unstructured?

DECISION-MAKING



Are decisions taken by one, several or all team members?

DISTRIBUTION OF ROLES

Which roles are in the team? Are these dynamic or fixed?

Table 3: Focal Points in Facilitation, NTNU, Are Holen, 2016. (reformulated by BAAA)

Status of the network

The EIT Network has existed since 2012. Up until now the aim of the network has primarily been to disseminate knowledge about the EIT Method within Scandinavia.

The dissemination takes place through seminars, network meetings, creation of learning material and practitioner / academic papers.

The EIT Network was formed by principal Scandinavian educational institutions with NTNU as the front runner. NTNU has developed the EIT Method and used it in curricular activities for +10 years. The generosity of NTNU has allowed other institutions to learn from the solid experience from NTNU.

Some institutions in the EIT Network have implemented EIT courses in curricular or extra-curricular activities over the past years. These activities build on the EIT Method from NTNU. Other institutions within the EIT Network have an interest in learning more about the method at an interest level.

The EIT Network aims at disseminating EIT experiences at different levels to a variety of stakeholders. At the moment the dissemination activities have primarily been directed towards education institutions in Europe and the US.

An important part of these activities is to give examples of how the EIT Method can fit into the institutions' strategic, tactical and operational levels depicted below.

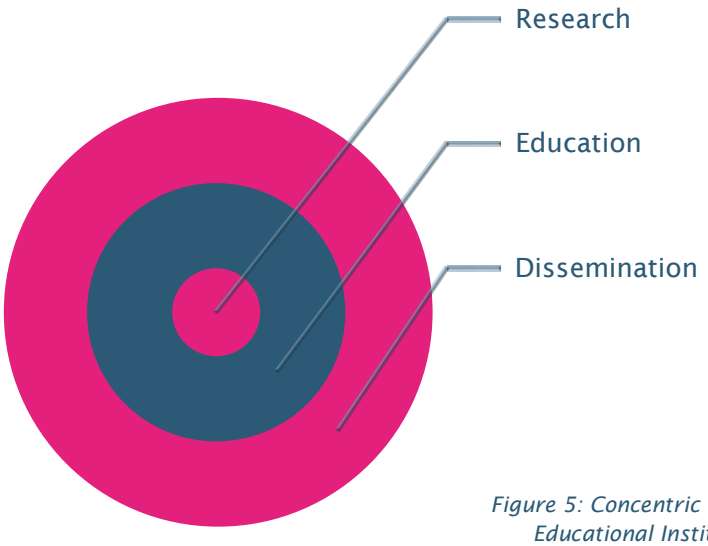


Figure 5: Concentric View of Educational Institutions, Ulla Haahr, 2016.

An organizing vision for the EIT Network

The EIT Network has initiated a variety of activities which support the implementation of the method at different education institutions.

The EIT Network has addressed a need for a stronger organizing vision for the future of the EIT Network.

One may argue, that a challenge for the network is to legitimize the network and hence the EIT Method itself as an integral part of current and future educational programs.

An organizing vision would contribute to drive the EIT Method further forward in order to make students and employers able to assess and hence demand this specific competence.

An organizing vision would maybe enable and lighten the process of implementing the EIT Method at more institutions and encourage collaboration between faculties and different disciplines.

Therefore, this seminar aims at getting more input for the formation of an organizing vision for the EIT Network. An organizing vision should enable educational institutions to coordinate and later formalize the use of the EIT Method according to pragmatic tests among stakeholders such as students, companies and lecturers.

Hence, an organizing vision is a way to legitimize and locally formalize the efforts of the network.

If one should depict the development paths for the EIT Network, one could use the figure below.

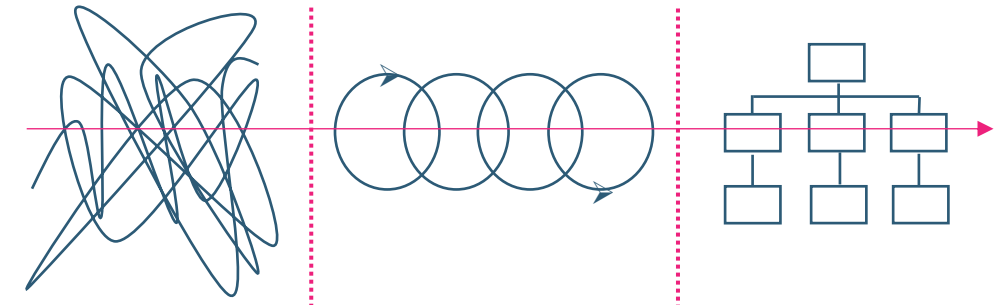


Figure 6: The Path To An Organizing Vision, Ulla Haahr, 2016.

Seminar output

The following pages will be summarizing the main aspects and points from the seminar content.

Founding fathers of Experts in teams

w. Dr. Bjørn Sortland & Dr. Are Holen, Norwegian University of Science and Technology.

The founding fathers of Experts in Teams Dr. Bjørn Sortland and Dr. Are Holen guided us through the Experts in Teams history and an update on the Nordic network. Furthermore, we were introduced to their reflections on the EIT Method. This abstract will briefly summarize the main topics.

Historical context
Experts in Teams have been introduced and developed since 2001 at NTNU. It started as a project for civil engineer students and later became a mandatory part of the educational program. After 2 years of try-outs it was implemented and after 5-6 years it also became part of other educational programs. During the try-outs NTNU explored a challenge engaging the students and facilitators to actually transform the interdisciplinary teamwork into a learning process. The result of these experiences resulted in a two-day facilitation course that should ensure that the process would be handled in a professional and dedicated way.

The main subjects from NTNU's experience with Experts in Teams, are among others, as follows. Firstly, the importance of strong cooperation between different disciplines and work methods to obtain creativity and connectivity. The more successful cooperation - the better learning you get. Secondly, the social knowledge, the process and the product should be created together. Even though the product is the outcome, the learning outcome of group dynamics originates from the process. The students have to be open and committed to the process, in order to learn from the process. Otherwise they will probably face a critical learning point.

The EIT network
The EIT network started with 6 institutions, and now the network has expanded to 11 institutions from different countries in Scandinavia. From the beginning it has been our thought to share experiences with others, which we think is the best way to communicate and learn. We want to share knowledge with partners and create a solid foundation to develop Experts in Teams. We believe that the EIT Method that gains more strength when it is shared. The network has developed a cross-sectorial network which means that for example in Norway, LO (The Norwegian Confederation of Trade Unions) also participates. One of the goals of the network is to fulfill the ambition of involving more companies and employees in Sweden and Denmark as well. If we succeed in this cooperation, it will strengthen our ability to focus on specific demands from business communities.

At the moment, the network has participants from Scandinavia – so should we invite partners from other institutions and countries around Europe? It is necessary, however, to find adequate funding resources.

In future, we imagine that the collaborators in the EIT Network could be a market place where each network member can tell about experiences. A circulation of experiences. Furthermore, doing research together may be the next step. We believe that the conferences are an important element, especially disseminating experiences and knowledge in the network and to other stakeholders.

Reflections
During the development of the EIT Method at NTNU, the importance of motivating students and create a focus on the reflection process was initiated. Therefore, it is vital that facilitators become aware of the valua-

ble outcome from the learning- and reflection processes. When the facilitators support the students in combining the processes, it will become a meta-cognitive learning process, and not just a learning experience. In other words, the reflection and evaluation are key words in EIT. Every day the students should evaluate the process, both individually and in groups. During their participation in EIT the students receive a reflection book to help them through the process. The process reports are just as important as the product.

Interdisciplinary teamwork

'Interdisciplinary teamwork skills' is the key component in Experts in Teams. This is also the reality we are facing when receiving feedback from companies being involved in EIT. They emphasize the importance of the ability to cooperate and work across different disciplines. The competence of working together is simply fundamental. When the students master the skills of interdisciplinary teamwork, it increases the chances of growing a level of creativity inside the team. Creativity arises from different perspectives from students with different backgrounds.

Besides the ability to work across disciplines, it is essential that the students build social competencies in order to function in a team. Put together, these competencies will probably increase the students' chances to enter the job market afterwards. To manage the full potential of the students, it is important that the EIT course comes at the end of the semester, where the student have built their knowledge and are aware of own competences. In other words, it is necessary for the student to have a strong self-identity in relation to the exact discipline that the student represents before attending the EIT course.

The EIT course is extensive, so is it possible to make a lighter version to implement in the class room without the interdisciplinary elements? This is challenging and not the intention with the EIT Method developed by NTNU. The key in teaching interdisciplinary skills is exactly the fact that EIT makes people from different disciplines work together. For that reason, it does not make sense to put together students in monodisciplinary teams. Also the ability to reflect upon one's own ability to learn and collaborate in the team is difficult. So it is recommended that students have a chance to practice their skills in the interdisciplinary setting to reflect upon and achieve the intended learning outcome.

From a researcher's perspective

w. Peggy Kelterborn, Scientific Associate, Faculty of Economics, Ilmenau University of Technology, Germany.

During the EIT Seminar, Peggy Kelterborn presented the findings from her Ph.D. thesis. This disruption represented a more theoretical insight into interdisciplinary teamwork. The Ph.D. thesis focuses on the intersection of psychology and economics, for the better understanding of micro-foundation of entrepreneurship. Peggy introduced us to her research stay at the University of Southern Denmark in 2014 where she empirically investigated the psychological phenomena of the generation of business ideas in terms.

Summary of conference disruptions

This summary is a short resume of the conference disruptions. Focus will be on how the various disruptions contribute to different perspectives on the EIT core competence – being able to collaborate across disciplines.

#disruption 1: '25 Years of flying in Kaos'
w. Bo Blaabjerg, Head of Consulting, Kaospilot, Aarhus.

The main topics from the '25 Years of flying in Kaos' is firstly why it is important to focus on the process, and not the final product. The student's main interest is – or should at least be - to learn and not to perform. The best final outcome appears when students during their work, use reflection and evaluation to improve their work and process. Secondly there is a big different between learning culture and business culture. Even though we try to prepare the students for the "real world", the key to the student's benefits is to establish a secure and curious learning culture. Thirdly, it is very important not to associate risk and failure negatively – it is a part of the process. If the students have the failures during their education, they learn how to tackle this in the "real world". The last topic, is why it is important that the students understand the value of sharing knowledge with each other. Together they can create a better output and increase their learning.

In addition to the main topics, Bo Blaabjerg listed conditions which may support an educational group process:

- A set of rules, according to setting the scene.
- Trust among the student is a key component to create a secure learning space.
- A culture where everybody is allowed to and have the courage to challenge each other, state their opinion and ask questions.
- Reflection and evaluation are important tools to create learning. The students have to reflect upon their own work, and ask themselves questions like: What was good? What was bad? How can we make it better? What was really good? How can we make that even better?
- The importance of training in becoming a good team member.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- Aspire to establish a curious learning culture in the EIT teams.
- Encourage the students to share their knowledge.
- Keep focusing on the process and support the students in reflecting to improve their own work and increase their learning.

#disruption 2: 'Rethink Banking'
w. Thomas Weikop, Entrepreneur & Head of Strategy, MobileLife, Danske Bank.

The main topics from 'Rethink banking' is first of all the accept of failure as a part of the process. Failure is as big a part of the achievements as the successes are. Especially when you are working with technology the developing process often takes a long time, and when you are done solving the problem – it may not be relevant any longer. Therefore, it is important that the team launches its project, when it is only partly developed, and gather feed-back during the process. The team then has to be prepared for failures and constant changes.
Another central point we learned from this disruption, is the value in equality among all team members, for example by given all team members the same title. In this context Thomas Weikop listed five different prioritized values for successful teamwork in Danske Bank:

1. Collaboration over hierarchy
2. Skills over titles
3. People over processes
4. Learning over forecast
5. Mindset over skills

Lastly it is worth mentioning the point about giving the team freedom to create and work in a creative space – as long as they reach the final goal as agreed.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- The importance of equality among team members.
- Feedback from customer/consumer/external partner during the process.
- Failure as a part of the process.
- Freedom to create and work in a creative space.

#disruption 3: 'Agile Global Teams – Tools & experience'
w. Zahid Abdullah, Founder & Director, TEO International A/S.

Zahid Abdullah's focus was collaboration across different cultures. TEO works with teams composed of members from Denmark and Pakistan. A main topic in this disruption, was the fact that with the right tools, teams can come together despite diversities. A key tool for TEO, is the 'Team Poster'(www.team-poster.com). The aim of this tool, is mapping the different skills the team contains. First the group focuses on its individual social skills (quality of collaboration), then process skills (quality of process) and last technical skills (quality of the product). The aim of the 'Team Poster' is to create the best conditions and a solid background in relation to the further process. Another essential point from TEO's experience with interdisciplinary teams, is the importance of embracing the diversity. Even though this is challenging in a professional environment. Therefore, the teams must face the reality that crises will come, and despite that not give up and choose easy solutions. The goal is not to change everybody – it is to make the team work. Experiences from TEO shows that a successful way to increase business despite challenges, is if the team have a big enough reason to continue. For example, common beliefs and goals. As a last topic from this disruption, it is worth mentioning the fact that a good teamwork, according to Zahid Abdullah all depends on the team members' attitude. When you work with people, especially in a team, it is not just a job. It is about universal values – and the decisive fact, is the mental attitude among the team members, and maybe more important how they perceive with others.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- Make an effort regarding the social integration in the group.
- Let the team know, that crises will come. Support them to move on towards the common belief or goal.
- Do the team members have the right attitude? Are they aware of their perception with others?

#disruption 4: 'Group dynamics in interdisciplinary teams'
w. Dr. Are Holen, Department of Neuroscience, Norwegian University of Science & Technology.

Are Holen introduced two main challenges in creating interdisciplinary teams with people who have never met before. First how is the social integration within the group? Second, how do you highlight the diversity in competencies to the benefit of the project? A suggestion for how to deal with these questions was the main theme in this disruption.

When introducing the team members, it is important to tie an experience or emotion to their verbal presentation. The team members will then be more inclined to remember and reflect on their own and oth-

ers' presentation, and a foundation for positive social interaction is planted. The goal for interdisciplinary teams, is to go from an "I" mentality to a "we" mentality. Cause when the team obtains a "we" mentality it will improve the collaboration and increase the learning.

Before starting the project, it is also important to clarify which competencies each person brings to the table. In that way it is possible to highlight the diversity in the team members' competencies. At the same time, it is important that there is no hierarchy in the group. All team members are equal, and it is necessary that they also feel this while participating in the team. Students must during their participation reflect and evaluate upon the process and their own contribution to the teamwork. Reflection and feedback are the cornerstones of learning and personal development, which is why it is very important to incorporate it in the process. A new way of conducting feedback is peer evaluation where the students evaluate other students. This technique teaches the students how to provide constructive feedback – both positive and negative. During peer evaluation, the student's might also be aware of the differences between the competencies represented in the team.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- Make an effort regarding the social integration in the group. Aim at achieving a 'we' mentality.
- The importance of equality among team members.
- Integrate peer-evaluation in effort to increase the learning and the personal development.

#disruption 5
w. Erlend Høyersten, Director, ARoS Aarhus Art Museum.

We were introduced to the vision behind recent years' success of ARoS since EH took over the position as director. We were kindly introduced to ARoS and the ARoS was put into a world perspective regarding artistic aims and visions.

#disruption 6: 'Part of the LEGO success – integrated innovation teams who deliver global play experiences'
w. Kenneth Damgaard Hansen, Senior Director, Product Marketing & Development, The LEGO group.

Kenneth Damgaard shared three essential findings from LEGO's experience in working with interdisciplinary teams. The first finding emphasizes the importance of a known framework when working with innovation. A part of the framework, is setting a common goal and ensure that the team members share the same beliefs and priorities in the way they work. When inviting employees on board very early in the process it increases their chances for being committed to the project – and create a solid foundation towards a common goal. Therefore, LEGO works with a well-known development process for all their projects. The second finding, learned us that an integrated team set-up is where the power sits. Two key components to create an integrated team, is the members' knowledge about their own role and a unified process vocabulary. This enables effective collaboration around complex development tasks. LEGOs team set-up consists of three elements – the core team, an on-site team and an off-site team. The core teams are head of the development. The on-site team is all physically present in the same room, but report across departments. The off-site teams are specialists called in part time. All members, regardless of their role in the project, are responsible for the final product – as Kenneth Damgaard said: "*You are accountable for more than you are responsible for.*" The third finding, is about moving the decisions close to action. LEGO learned from this finding, when the power stays in the team whenever possible, it increases the motivation and reduces complexity. It is very important to secure that

the projects complexity not become complicated to work in.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- Reduce complexity – use a known framework.
- An integrated team is essential for a successful collaboration.
- Everybody is responsible for the final product.
- Move the decisions close to action.

#disruption 7: 'Copenhagen Suborbitals'
w. Mads Wilson, Copenhagen Suborbitals – The world's only amateur space program.

Mads Wilson introduced us to Copenhagen Suborbitals. A non-profit, amateur based space endeavor, funded by private sponsors and donors. The special thing about Copenhagen Suborbitals in this context, is the fact that it is driven by volunteers, all motivated by sending a human being into space. So even though they do not have any professional project managers, the final goal sets the path for the work process. Another consequence of the volunteer based project, is the fact that nobody actually wants to do what they are good at in their daily jobs. For example, if they have a team member, who do project managing for a living, this person will rather try to actually build something, because he is managing projects all day, so in his spare time, he wants to try something completely different. In this case, it is hard to get people to do what they are actually good at – and that is a problem. However, this fact still emphasizes that a common dream can guide an interdisciplinary team towards its goal. Another theme on this disruption, was the fact that Copenhagen Suborbital actually aren't doing anything new at all. Wilson's main message by telling us this, was that bigger, crazier and more spectacular is not always better.

To sum up, the main subjects in relation to developing the EIT Method, we recommend to focus on:

- Are the team members actually using their professional expertise in the teamwork?
- The strength in a common dream or goal.
- Bigger, crazier and more spectacular is not always better.

Workshops

During the EIT seminar, we facilitated two workshops with the headlines 'Global' and 'Education'. This abstract should reflect on the aims of the workshops. First the object involving the participant's experiences when working with different tools during interdisciplinary teamwork in the 'Education' workshop. Afterwards the experience and the discussions from the 'Global' workshop followed by a list of various proposals for the overall workshop question – 'How can the EIT Method become a game-changer and well-known innovative tool in today's education?'

Workshop: Education

During the Education workshop the main purpose was to try out interdisciplinary teamwork. The participants were guided through the workshop with an introduction to various sets of tools, all in relation to encouraging the interdisciplinary experiential teamwork and how to be aware of the process and one's own competences.

The aims of the workshop

- To learn more about competency mapping, facilitation & reflection.
- To discuss topics which can contribute to decide on a future organizing vision for the EIT Network.
- To work in an interdisciplinary team
- To practise some of the tools of the EIT Method.
- The get an improved understanding of tools that aim at fostering improved team dynamics.
- To network with education professionals.

Facilitation in the workshop

The workshop was run by a team of lecturers from BAAA and SDU. The team of lecturers have experience in using the EIT Method during EIT courses at SDU and BAAA. They gave an introduction to the EIT process as it is practised at BAAA and contributed with support and guidance to the teams.

Team of facilitators

Hanne Charlotte Helgesen, Assistant Professor, Student and Academic Division Staff, NTNU

Sven Veine, Assistant Professor, Student and Academic Division Staff, NTNU

Are Holen, Emeritus Professor, Department of Neuroscience, NTNU

Jesper Nørskov, Senior Lecturer, Department of Research & Innovation

Tools to encourage teamwork

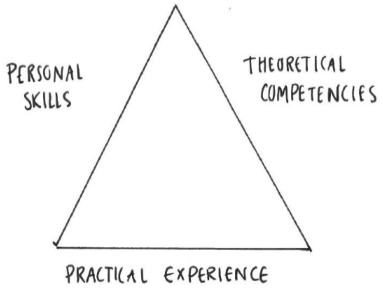
Overall the participants expressed a high satisfaction in their experiences trying the different tools, and gave a positive response on its purpose. During the workshop the participants were split into different groups. Each group then should actually work together in an interdisciplinary team. The observers should try out different observations and facilitations tools. To mention an example, the observes should practice to use a so-called 'Sociogram'.

Sociogram

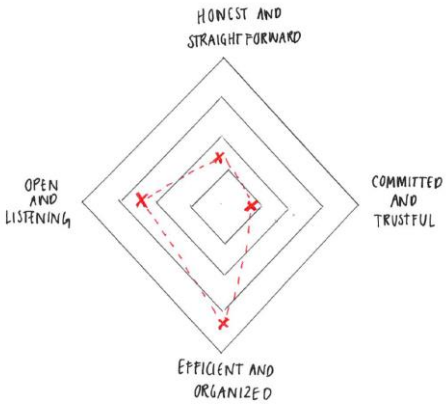
The main intention when drawing a sociogram is to clarify the communication within the group, and make sure that the communication pattern becomes visible for all team members. The pattern can contain involvement, non-verbal communication, asking and answers patterns, who talks to whom, etc. More specifically, you have to draw the team members' place around the table on a blank piece of paper. When the team starts to discuss you draw lines between the persons who communicate or have eye-contact. You continue to draw these lines for about 10 minutes, and then show the sociogram to the team. Let the team members comment on the communication pattern and ask facilitating questions if necessary.

While the team was under observation, it also worked with different tools within the team. On the this page, you find a short description of selected tools.

Competency triangle
The purpose of the exercise is to make the team members aware of their own competencies and give the team an overview of the combined competencies in the team. This is achieved when each team member explains his or her theoretical competencies, practical experiences and personal skill in relation to the challenge or case or theme they should work with in the team.



Collaboration-indicator
The collaboration-indicator is a survey, where each team ranks different aspects in the teamwork from one to five. For example, the students may rank 'To what extend do the participants listen to each other?'. Afterwards the answers are converted into a diagram. The diagram has the shape of a diamond square, and shows how high the group scores on each of the four axes. Each one has a headline: 'Honest and straightforward', 'Committed and trustful', 'Efficient and organized' and 'Open and listening'. The further out from the center the diagram, the better. The purpose of the diagram is to stimulate the reflection in the group. When answering the questions individually, the team members may be more open to give an honest answer. Therefore, the collaboration-indicator should motivate the team to discuss certain aspects of the teamwork that they under other circumstances may not have discussed at all.



Individual reflections
The purpose of this exercise is that the team members learn as much as possible from the experiences. To express the experiences through words is a way to connect the link between experience and reflection. This should make the team-members aware of their contribution to the team and the collaboration in the team.

Learn more about the exercises we refer to in the 'Experts in Teams' handbook from NTNU. (www.ntnu.edu/EIT)

The overall question
The overall question for the Education workshop were: "*How can a mapping of competencies work as an important tool in interdisciplinary experimental teamwork?*"

The answer to this question was based on the participant's own experiences with practicing the tools. The collaboration-indicator, is a way to improve the teamwork when bringing the results into the reflection processes. Based on the fact that we know that the students often experience a hard time doing the reflections, it is important to find tool which can support this

activity. The tools also help the participants to talk about the process and their roles in an organized way. Furthermore, the tools make it easier to talk about the 'difficult stuff' that can have a bad effect on the teamwork and that no-one has the courage to say out loud. In other words, John Dewey said it years before we did *"We do not learn from experience - We learn from reflection on experience". (*Dewey, 1933)

Workshop: Global

The Global workshop had two main purposes. First of all, to come up with different perspectives to the overall question: "How *can the EIT Method become a game changer and well-known innovative tool in today's education?".* Secondly, to gain an insight in and try out how the Experts in Teams method is implemented on BAAA. The participants were split into groups and their work was facilitated by senior lectures from BAAA.

The aims of the workshop

- To learn about the EIT process at BAAA.
- To discuss topics which can contribute to decide on a future organizing vision for the EIT Network.
- To work in an interdisciplinary team.
- To practise the use of some of the main tools of the EIT Method.
- To network with business and education professionals.

The teams started their work by making a collaboration agreement (see description below) followed by a presentation of each team member using the competency triangle.

Collaboration agreement
The purpose of the collaboration agreement is to balance expectations and to define success criteria and principles for the collaboration. For example, how the team will manage conflicts and make decisions. The agreement should be used if your team ends up in a conflict situation. The collaboration agreement may also function as a reflection tool for the team during their process.

During the workshop, the process was organized against the 3 zone innovation process. The participants were then guided through the yellow, green and red zone. The 3 zone innovation process is a key tool in the EIT Method on BAAA. This process

encourages the teams to think innovatively while it simultaneously also fosters proposals for a valuable outcome. The participants learned why it is important to have a curious mind in order to create an efficient and creative process within the team.

Team of facilitators

Lea Sørensen, Senior Lecturer, Department of Research & Innovation

Lise Skriver, Senior Lecturer, Department of Sales, Service & Marketing

Peter Mosdal, Senior Lecturer, Department of Digital Communication & Multimedia

Steffen Kjær Johansen, Assistant Professor, SDU Engineering Operations Management

Key themes in discussions

The participants in the Global workshop especially emphasized two perspectives from their experience within their teamwork:

1. How the focus on innovation and innovative process tools during their work with the overall question fosters a strengthened and better output. Particularly how the process was managed by the three zone innovation process, which forces the team to agree on decisions.
2. How a focus on the overall question (and product) may strengthen the changes to spread the method to business/industries. Not only does the EIT Method create value during the process, it also creates value for the stakeholders receiving the product that the team has been working with.

Summing up, the main themes from the discussion between participants trying out how BAAA uses the EIT Method two words are key points: *innovation* and *product*.

The chronicle includes a collection of exercises for the three zone innovation process for inspiration.

The overall question

The overall question for the Global workshop was: *"How can the EIT Method become a game changer and well-known innovative tool in today's education?"* During the methods described above, the participants came up with different aspects answering the question listed below.

Selected proposals from red zone:

- EIT ON TOUR (SUMMER SCHOOL)
- EMPHASIZE SUCESSFULL CASES FROM COMPANIES
- PROVE THE METHOD BY SCIENTIFICALLY RESEARCH
- PROMOTE EIT THROUGH A METHOD-APP / MAKE AN EIT METHOD APP
- SPREAD THE WORD VIA SOCIAL MEDIAS (LINKEDIN, INSTAGRAM, FACEBOOK)
- ESTABLISH A SUMMERSCHOOL (SUMMER COURSE BEFORE NORMAL START)
- MIX DIFFERENT EDUCATIONS AND RUN 1-WEEK COURSE
- USE EIT AS A 'SELLING POINT' IN REGARD TO INTERNATIONAL STUDENTS
- INVITE MORE COUNTRIES TO PARTICIPATE IN THE EIT NETWORK
- INVITE STUDENTS FROM EUROPEAN COUNTRIES TO BE AMBASSADORS WHEN JOINING A FREE EIT SESSION
- TRY IT OFF IN PRIVATE OWNED COMPANIES
- MORE PRESS, PUBLISHING AND BRANDING
- SEND AN EIT TEAM ON TOUR IN EUROPE TO EXECUTE '1-DAY-EIT' EXPERIENCE AND '1-DAY-TRAINING-FACILITATORS' COURSE
- MAKE A REAL LIFE 'SOAP' FOR TV USING EIT ON A SEXY CHALLENGE
- MAKE EUROPEAN LEADERS IN BRUSSEL DO AN EIT ON COMMOM CHALLENGES
- MAKE A BIG COMPANY (FX. GOOGLE) INTERESTED AND OFFER THEM FREE EIT ON CONDITIONS THAT THEY COMMUNICATE THE OUTCOME
- PHD COURSE
- INVOLVE STUDENTS
- EIT CERTIFICATION
- EXPAND EIT TO KINDERGARDEN, PRIMARY SCHOOL AND OTHER EDUCATIONAL INSTITUTIONS
- INVOLVE VARIOUS EDUCATIONAL INSTITUTIONS
- IT EDUCATION PLATFORM FOR STUDENTS
- MAKE EIT A TOPIC ON WEF (WORLD ECONOMIC FORUM) IN DAVOS
- CHAMPIONSHIP

- UNDERLINE THE FACT THAT EIT INCREASES THE STUDENTS CHANGES TO ENTER THE JOB MARKET
- RECOMMENDATION AT GOVERMENTAL LEVEL
- COMPETENCIES TRANSFORMED TO A SET OF TOOLS
- DEFINE THE VALUES FOR STUDENTS, COMPANIES AND SOCIETY
- INVOLVE BUSINESS COMMUNITY IN THE DEVELOPMENT OF EIT
- MAKE THE EIT COURSE SUITABLE FOR VARIUS EDUCATIONAL INSTITUTIONS AND DISCIPLINES
- PRACTICAL WORK WITH THEORETICAL KNOWLEDGE
- USE COMPANIES TO GIVE 'THE SEAL OF APPROVAL'
- FIND EIT AMBASSADORS ON THE EDUCATIONAL INSTITUTIONS
- TEAMING UP WITH THE BEST COMPANIES
- EMPHASIZE THE VALUE OF EIT
- SPREAD THE WORD THROUGH LECTURES - HOW CAN YOU BENEFIT FROM EIT?
- DRAW EXPERIENCES FROM THOSE WHO REPEATEDLY HAVE USED THE EIT METHOD
- APPLY THE STUDENTS EXPERIENCES AS REFERENCES
- GATHER RESEARCH FROM ALL PARTICIPANTS IN THE EIT NETWORK WHO HAVE HELD EIT - IS IT A GAME CHANGER?

Post seminar

The seminar was followed up by a post-seminar – a facilitation course developed by NTNU in Trondheim. Presentations were given by Professor Are Holen and Assistant Professors Hanne Charlotte Helgesen and Sven Veine. This article will shortly sum up the main topics from the presentations. The aim of participating in the workshop was to increase ones' theoretical knowledge about facilitation and practical skills through role plays.

Group dynamics – observation and intervention
w. Dr. Are Holen, Professor, NTNU – Faculty of Medicine. Department of Neuroscience.

Firstly, Are Holen gave an introduction to facilitation and what role a facilitator should take during Experts in Teams courses. Facilitation is a pedagogical tool to encourage experiential learning and is used to support the team members to be conscious about themselves. Facilitation must encourage the students in behavioral changes, if the changes should have a positive effect on collaboration, productivity and creativity in the team. Furthermore, facilitation must encourage the students' awareness of insights in social conditions to enhance successful collaboration in the teams.

The facilitators' contribution can help the team members to reflect on and explore the collaboration in the team. Through joint reflection, the teams can strengthen their collaboration and find out what works well, and what works less well. Therefore, the facilitator must have an obviously open interest in the team and the individuals.

Facilitation has at least three main activities:

- Observation
- Filtering and assessment of observations
- Interventions when necessary

Observations of the group's workflow and communication give the facilitator a basis for understanding and mapping group dynamics. The facilitator will assess how the team handles the essential conditions for a successful collaboration. If the facilitator assesses some remarkable or undesirable patterns which is not addressed in the team, it is the facilitator's job to intervene, to make the team aware of the patterns and to encourage the team to change the patterns. The aim is to support the team to grow and utilize its potential and increase the learning outcome both as a group but also as individuals.

After an introduction, Are Holen described five different ways of facilitating:

- Facilitation using instruments (for example sociograms)
- Facilitation using conversation
- Spontaneous facilitation
- Facilitation using exercises
- Facilitation using the team's reflections

Whether you choose one way or another to facilitate, the common aim is the same, and chances for the team to oppose to the interventions are present as well. The reason why the team oppose can occurs due to different reasons. The main point is for the facilitator to be prepared for the resistance and 'keep your head up high'.

To learn more about facilitating, we kindly refer to Are Holen and the 'Eksperter i team 2016 handbook' from NTNU. (www.ntnu.no/EIT)

Workshop – basic facilitation techniques
w. Hanne Charlotte Helgesen & Sven Veine.
Assistant Professors, EIT Office, NTNU.

Firstly, there will be an English edited summary of the activities, followed by a short paper written by Hanne Charlotte Helgesen and Sven Veine (in Norwegian).

The main focus in the workshop was to give the participants the opportunity to practice their facilitation skills and techniques. The

theoretical core was Are Holen's presentation about group dynamics. The workshop had special attention on observation, how to use sociograms while facilitating and the ability to ask open questions.

Workshop summary
Throughout the workshop the participants became part of different activities. First of all, the participants started the workshop by sharing their current mood and their expectations to the course. Afterwards Hanne Charlotte Helgesen and Sven Veine went through a short summary of the main theory behind facilitation and group dynamics. Most of the workshop was spent on practicing facilitation and reflect on one's own facilitation practice, for example by comparing it to two planned role plays. Here students from NTNU played planned roles together with participants in the workshop.

Observation
The facilitators' most important job is to observe the teamwork, and on this basis of this, to encourage students to reflect on how they work together as a team. The keywords are to *watch* and *listen*, and the focal points for the facilitator to look for are:

- Continuous unsuccessful patterns in the collaboration.
- Polarization – are there any tensions between different groupings?
- How are the team members acting? Do they play a specific part in the teamwork?
- Decisions and ownership – focus on one or several people?
- Productivity and process – is it a goal-oriented or an unstructured process?
- Trust and well-being – does the team have the right mindset?

Facilitation using sociograms
A useful tool for the facilitator is a sociogram. The facilitator draws a sociogram to visualize unique aspects of the communication in the team. For example:

- Participation – who talks, and who does not talk?
- How long each team member spends talking?
- Question and answer patterns.
- Non-verbal messages, such as eye contact.

After drawing the sociogram, the facilitator shares it with the team members, so that they have the opportunity to reflect on it. This method supports the team member's awareness of their own behavior, and will afterwards enable the team to function better socially in relation to the project.

How to ask open questions
The aim of asking open questions is two twofold. First and foremost, the questions are asked in order to give the students an opportunity to elaborate on their experiences, feeling and thoughts about the teamwork and collaboration. Second of all, the questions are asked to make sure, that the team solves its own problems in relation to the collaboration. If and then the team does not have the answers in advance, it increases the learning outcome.

What we learned
To have feedback on one's own facilitation skills, gained a strong output but also a realization of, that training is the key to become a good facilitator. Therefore, the fact that the participants actually had to practice their facilitation skills gave the workshop a successful output. The participants showed a big interest in integrating workshops like this one into next year's seminar in Uppsala.

Workshop - grunnleggende fasiliteringsteknikk

Written by Hanne Charlotte Helgesen & Sven Veine. Assistant Professors, EIT Office, NTNU. 20.06.2016.

Mål

Worshopens målsetning var å gi trening i grunnleggende fasiliteringsteknikk slik det praktiseres i opplæringen av læringsassistenter i EIT, NTNU, Trondheim.
Workshopen var en videreføring av Are Holens teoriseminar dagen før. Det ble særlig lagt vekt på observasjon, bruk av sosiogram og trening i å stille åpne spørsmål på gruppenivå.

Deltakere

Det var ni deltakere tilstede, fra Syddansk Universitet i Odense, Danske teknisk Universitet i København, Uppsala universitet og fra Ervervsakademiet i Aarhus.

Seminarledelse

Fra NTNU deltok, i tillegg til universitetslektorene Sven Veine og Hanne Charlotte Helgesen som ledet workshopen, to undervisningsassistenter som rollespillere, samt Are Holen som observatør og kommentator.

Gjennomføring

Workshopet besto av en innsjekk, hvor hver enkelt sa noe om hvordan de hadde det akkurat nå, og hvilke forventninger de hadde til workshopen. Det besto videre av en kort oppvarming for den praktiske fasiliteringsøkten og en gjennomgang av sentral teori med henvisning til de samme poengene Are Holen hadde gjennomgått på teoriseminaret dagen før. Det meste av tiden ble brukt til å praktisere fasilitering og reflektere omkring denne i forhold til to iscenesatte rollespill som utspilte seg «live» i workshopet.

Evaluering

Flere nevnte at det var lærerikt å få tilbakemeldinger på sine egne fasiliteringer. Andre nevnte at fasilitering krever trening og at det var lærerikt å eksponere seg. Det ble også nevnt at rollespillene var gjenkjennelige og troverdige. Til sist ble det nevnt at ved neste års konferanse er det ønskelig at en tilsvarende/lignende workshop arrangeres som en del av konferanseprogrammet.

Its21 seminar 2017

To continue the work with interdisciplinary teamwork skills and strengthen the collaboration in the EIT network we are happy to announce the 3rd Its21 seminar hosted by Uppsala University in Sweden. The seminar will be held on **13th and 14th of June 2017**.

Our main focus will continuously be to share experience within the seminar participants and develop the EIT Method even further.

If you have any questions or suggestions on applications for presentations, please do not hesitate to contact:

Svante Axelsson

E: svante.axelsson@uadm.uu.se

T: 046 (0)184711596

We hope to see all of you again!

Seminar program 2016

Please visit: baaa.dk/seminar/program.

Learn more…

At NTNU: ntnu.edu/EIT
Contact person:
Bjørn Sortland, bjorn.sortland@ntnu.no

At SDU:
http://www.sdu.dk/om_sdu/fakulteterne/teknik/samarbejde/expertsinteams/experts
Contact person:
Steffen Kjær Johansen, skjo@iti.sdu.dk

At BAAA: baaa.dk/EIT
Contact person:
Ulla Haahr, ulha@baaa.dk

Did you know that…

The theory of disruptive innovation was first created by Harvard professor Clayton M. Christensen in his research on the disk-drive industry and later popularized by his book 'The Innovator's Dilemma', 1997.

The theory explains the phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility and affordability where complication and high cost are the status quo. Initially, a disruptive innovation is formed in a niche market that may appear unattractive or inconsequential to industry incumbents, but eventually the new product or idea completely redefines the industry.

Read more: christenseninstitute.org

About Business Academy Aarhus

The nine business academies in Denmark are part of the Danish higher education system. The degrees combine the academic foundation with the transferable skills demanded in today's job market.

Business Academy Aarhus develops and offers practice-orientated higher education programs. With more than 4,300 full-time students, 3,400 part-time students and about 400 employees, BAAA is one of the largest business academies in Denmark.

Research and Innovation at BAAA
At the business academies, we work with applied research, development and innovation, which benefit and support our education programs, companies and society. Our projects are based on current issues, and we implement them in interaction with both students and companies. This means that the results can be applied in real-life after a relatively short period of time.

The results are also used in teaching in order to improve the quality of our education programs. We provide students with knowledge of development and innovation processes.

Research, development and innovation projects must generate results that can be used by specific companies. In a broader context, the results provide new solutions for growth and innovation.

All education programs at the business academies have mandatory internships. Therefore, the academies have a vast network of collaboration partners, particularly SMEs. These partners are often an important part om research, development and innovations projects.

Our research areas include:

Biotechnical, Food & Process Technology
Environment & Agriculture
Finance
Innovation & Entrepreneurship
IT & Technology
Sales, Service and Marketing
Web, Media & Communication

Read more: baaa.dk/about-us/research-and-innovation/.

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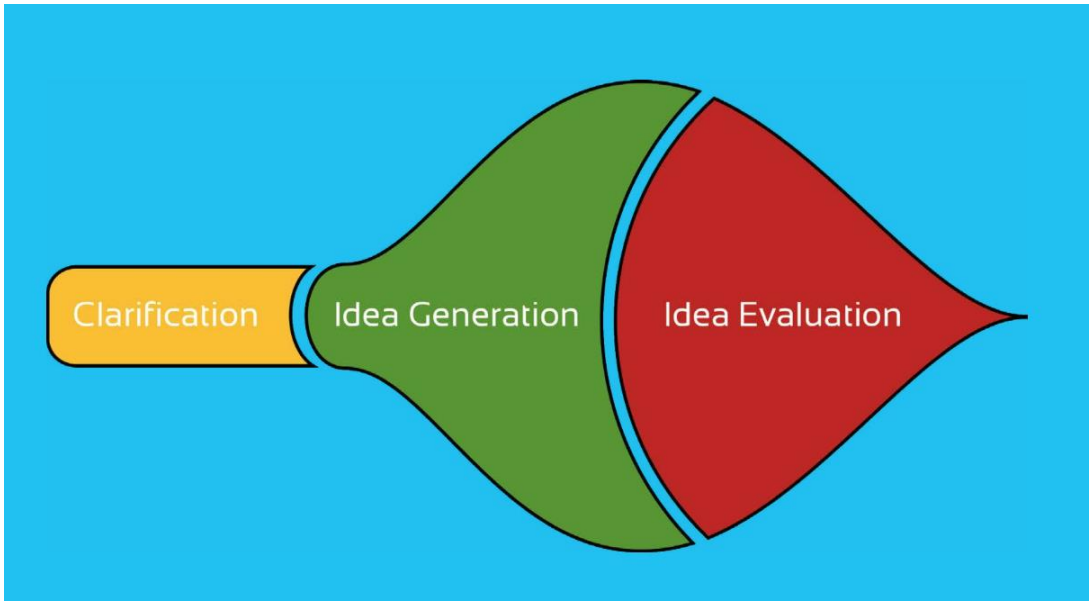
Appendix

EXCERCISES FOR THE 3 ZONE INNOVATION PROCESS

Centre for Innovation and Entrepreneurship
Business Academy Aarhus
23.11.2016

Phased innovation



The Helicopter – Yellow Zone

The Helicopter can be compared to a mind map – the point is to look at the problem statement from different angles and to find an angle that the groups find interesting to work with.

1) Write the central theme in the middle of a piece of paper.

2) Write related problems in circles around the theme.

3) Choose the problem you find most important and formulate the problem statement on the basis of the sub-problem you have chosen.

Attribute list – Yellow Zone

Brainstorm on the attributes or functions, which your problem/product/service has in order to discover which part of the problem it makes sense to focus on.

If the problem is "*How do we get a car to run 100 km on one litre of petrol*?" then this exercise will help you focus on e.g. the tires, the design, the size, the lacquer, the interior, the petrol tank, the engine or …. It's precisely this differentiation, which will create a more focused green zone.

1) Find a picture of your product/problem.

2) Start listing all the attributes, which the product/problem deal with.

3) Go through all attributes and evaluate the importance of them individually.

4) Select an attribute to work with going forward.

Scaling – Yellow Zone

By scaling the problem, you can get completely new eyes on what you should work on. If working with a practical problem "*How to reduce waste from young people's night out in the city centre of Aarhus*", the problem could be scaled to dealing with waste in Aarhus in general, or in Denmark, the world – all three scaling perspectives will provide different outcomes.

1) Find the core of the problem.

2) Enlarge the problem to involve more people or becomes an even greater public problem.

3) Keep enlarging the problem until you are satisfied with the character of the problem.

Adjectives – Yellow Zone

By including feelings or adjectives in your problem statement you often change how you see the problem.

Taking the example from The Scaling Exercise on waste, the problem could be rephrased to "*How do we make sure that young people will have fun recycling waste when they go out Friday night?"* Just by adding a few adjectives we change the angle on the problem and the following idea process will flow much more easily.

1) Brainstorm on some adjectives, which you feel could be associated with the problem statement.

2) Insert these adjectives in your problem and play with the phrasing.

3) Pick the problem statement which makes the most sense to you.

Individual brainstorming – Green Zone

An individual (also called a silent) brainstorm will ensure that everyone gets a say and empty their heads of all the initial ideas that come to mind. Doing that will prepare the entire group to take on the first association exercises together.

1) Write down your individual solutions to the problem.

2) One idea per post-it. It must be a short sentence not just one word.

3) Remember there are no such thing as a bad idea ☺.

Word Association – Green Zone

Classic association exercise, which help us draw our thoughts into new opportunity corners.

1) Write 10-15 words on a piece of paper. It must be words that are NOT directly linked to the problem.

2) Spend 2-3 minutes on each word to find ideas where you combine the word and the problem.

3) Only one idea per post-it.

4) Crazy, wild ideas are at this stage a great plus.

1. Rocket	2. Plant	3. Stretch-outs	4. Plate	5. Circus
6. Pig	7. Ferrari	8. Teaching	9. Harry Potter	10. Indian Ocean
11. Enormous	12. Boy	13. Eagle	14. Building	15. Fantastic
16. Noise	17. Idiot	18. Farmer	19. The world	20. Pluto

Example of a work chain

Picture association – Green Zone

Another classic association exercise. You might want to use services such as instagram.com, flickr.com or pinterest.com to choose pictures to work on.

1) Find 10-15 pictures on the Internet. It must be pictures, which are NOT directly connected to the problem area.

2) Each picture is placed one by one in the middle of the group so everyone can see.

3) The group creates ideas together and write them on post-it notes. Again only one idea per post-it note.

4) Avoid talking about the picture, just apply it to the problem context.

Negative Brainstorm – Green Zone

For some reason using a negative problem can often help you see completely new opportunities.

If you take the "young people producing waste when partying in the city centre of Aarhus on a Friday night" example - the negative problem would be "How do we get young people to litter as much as possible on a Friday night"? Looking at the problem with these new eyes a whole range of new angles and ideas will appear.

1) Formulate the negative problem.

2) Then produce negative ideas on post-it notes, and collect them in the middle of the table.

3) Convert the negative ideas to positive ideas that will solve the original positive problem statement.

Role models – modelling – Green Zone

Modelling is a classic association exercise, where you try to describe the solution to the problem as seen through the eyes of another person.

Modelling only works in groups mastering a high level of abstraction, and who know how to work with ordinary association techniques. If your group is having a hard time with the picture and word association exercise this is not a good exercise for you to do.

To make this exercise work use charismatic characters as "the other person", characters like Scrooge McDuck, Prince Charles, Madonna or maybe someone with special professional skills such as a carpenter, an engineer or a gardener.

1) Find a "special person" someone famous, fictitious, a persona.

2) Describe what functionalities or services this person would require regarding our problem.

3) Convert your functionalities to useful ideas.

Incubation – Green Zone

Many groups have a tendency to force the idea development process, and that generally is not a good idea. To understand that ideas need to undergo an iterative incubation period is new to many students, so here's a popular exercise, which will help you deal with this. It involves the fact that pauses are a significant part of the creativity process.

1) Drop all your exercises/tools and leave the room.

2) Do something completely different: play football, play a game, go for a walk, talk about the weather … or …

3) Allow your subconscious to work on the problem without forcing an idea or solution.

4) As soon as a new idea pops up write it down (don't discuss with the group, just write it down for later use) and continue with your break activity.

5) Sit down in your groups and share the new ideas that have come to you during your break.

Future – Green Zone

"Future" is an abstract association exercise, however it is often rather concrete to work with as you are using yourself and your own imagination to associate. The strength of the exercise is that you can use it in a lot of dynamic contexts and use it several times with different results.

You can for instance use it as a 2 and 2 walk and talk exercise or use it as a writing exercise for yourself, and it can of course also be used in plenum in the group.

1) Imagine a future scenario – define how far out in the future it is?

2) Close your eyes and fantasize on the problem statement in your group.

3) Imagine that you go for a walk in the future and use your "product" in the future, that you have solved your problem in the future.

4) Collect all ideas on post-its and continue to work with them using other exercises.

Circular brainstorm – Green Zone

Circular brainstorm is a concrete brainstorming assignment you can use in groups, who find it hard to do the picture and word association exercise. It is also an exercise where you "play around" a little with the group dynamic.

You may use separate sheets that are pre-programmed for the circular brainstorm. See example below.

1) Write an idea on a piece of paper.

2) Pass the paper on to the person in your group sitting next to you. He or she grabs the idea and builds on it.

3) The same paper continues all the way round in the group with all members building on the original idea until returning to the original idea "owner".

4) The idea owner compiles all the input and writes it down as one idea and present it to the group.

Idea grouping – Red Zone

Idea grouping is about sorting ideas. If you have had a fruitful Green Zone you will have a good many ideas on the table and many of them are probably very close or similar. They need to be grouped so we get an overview.

1) Put all your ideas on the table and find the ones which seem to match.

2) Give each of the idea groups a title.

3) If you have doublets, throw out one.

Idea Sorting – Red Zone

Before we become too rational, we open up to our gut feelings and get rid of those ideas, which we don't believe in without having to argue too much. If we were to find rational arguments for all the ideas, we can we will never be finished.

1) For every idea make a short presentation of the idea, if anything needs to be added write this down.

2) Ask if this idea is a solution to the problem we have chosen (Yes/No).

3) Place the ideas in two groups "Possibility", "Not a possibility".

4) When all ideas have been looked at, the group dismisses all "Not a possibility" ideas.

Idea Merger – Red Zone

We need the individual ideas to be clarified and for this we use Idea Merger. The starting point is the number of ideas, which need to be explained and easier to grasp.

We move from post-its to A4 paper trying to conceptualize our ideas. This process helps us get a common understanding of the ideas so we can compare, discuss them and put arguments forward to ascertain whether the idea is great or not.

Based on experience this exercise makes the difference between “good teams” and “mediocre teams”.

Most groups only conceptualize one idea, because they have already made their choice, while others use time getting all selected ideas scrutinized, and it is in this "closer look" that more (and even better) ideas emerge, new functionalities, new ways of merging ideas which all sums up to a range of even better ideas.

1) Make a general description of the idea in 5-6 lines. A good idea is to include a drawing to facilitate the understanding of the idea.

2) Describe the features, which make the idea special in relation to how they solve the problem.

3) Make an idea description in an A4 sheet. Use one sheet per idea.

Idea box – Red Zone

A fairly difficult exercise but it works really well if your group can select two criteria to measure your ideas on. Finding these criteria is something you could actually do as early as in the Yellow problem phase. This will help you make more rational decisions in your choice of solutions.

1) Pick two criteria, which must be filled before it can solve your problem.
Make a coordinate with criteria 1 at the X-axis and criteria 2 at the Y-axis.

2) Give your ideas a score on both criteria and place them in the coordinate, place the idea in the box.

3) Choose the five best ideas to continue working on.

Idea SWOT – Red Zone

SWOT is a method most of you know pretty well, and a SWOT is fairly easy to convert into an idea selection tool. It is not vital that the SWOT is used with proper focus on Internal and External Forces. What is more important is that you discuss ideas in the group and get to select one idea instead of another.

1) Identify the strengths of the idea, as well as its weaknesses, opportunities and threats.

2) Choose the best idea.