UNCONFERENCING AS AN APPROACH FOR FACILITATING ORGANISATIONAL LEARNING AND CHANGE

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Authors:
Prof. Dr. Patricia Wolf, Lucerne School of Business, Lucerne, Switzerland[1]
Dr. Peter Troxler, Waag Society, Amsterdam, The Netherlands
Dr. Ralf Hansmann, ETH Zürich, Zurich, Switzerland

Abstract:
This paper discusses the potential of *unconferencing*, a relatively new alternative to traditional conferences, as method for facilitating organisational learning and change. The paper describes the application of unconferencing at a large university (Swiss Federal Institute of Technology, ETH Zurich) which aimed at developing project proposals for CO2 reduction. The processes and outcomes of the unconference are described. A qualitative analysis of observations, narrative interviews and a participant survey was carried out to investigate whether, how and to what extent unconferencing can facilitate organisational learning.

[1] Corresponding author: Prof. Dr. Patricia Wolf, Lucerne School of Business, Zentralstr. 9, 6002 Lucerne, Switzerland, phone: +41(0)41 228 41 62, fax: +41(0)41 228 41 51, e-mail: patricia.wolf@hslu.ch

1 Introduction

Organizational learning has been defined as “the process of improving actions through better knowledge and understanding” (Fiol & Lyles 1985; 803). The term emphasizes change, adaptability and application of new knowledge (Argyris, 1996). Organisational learning is said to enable organisations to deal with changes occurring in their environment (e.g. Charkavarthy, 1982; Cyert & March, 1963; Kanter, 1991; Fiol & Lyles, 1985; Miles & Snow, 1978; Senge, 1990). Therefore, organisational learning is seen as critical competence of organisations (Dixon, 1992), or, as Schein (1993) puts it: “Learning is no longer a choice but a necessity.” (ibid: 85).

The increasingly rapid pace of change in the business environment has been acknowledged to constitute one of the six main antecedents of organisational learning (Morgan, 1988; Senge, 1990; Sadler, 1995; Denton, 1998). An ongoing societal trend towards sustainability and green management established a requirement of more ecological and socially just behaviour of organisations (Moore, 2005). Universities could play a pivotal role for the underlying societal transformation as their particular role within the society provides them with the autonomy, reflexivity and openness needed to explore innovative paths towards sustainability (Adomssent et al. 2007; Gudz 2004).

But how can a traditional university transform into what is called a ‘sustainable university’ (Adomssent et al., 2007; Velazquez et al., 2006)? The concept of sustainable universities highlights the potential of universities to promote sustainability learning processes in other organizations and domains of society through the reorientation of processes and campus operations, community service, research and education activities as well as by developing relationships, networks and partnerships addressing these four areas (Hansen & Lehmann, 2006; Lidgren et al., 2006; Lozano, 2006; Stephens et al., 2008; Velazquez et al., 2006). To traditional universities this means that they would first have to undergo a transformation themselves, a heavy organisational learning process. For achieving a maximum transformative momentum, support is needed both top-down from university board and faculty and bottom-up from students and employees (Adomssent et al., 2007; Gudz, 2004; Koester et al., 2006). Accordingly, Richardson & Lynes (2007) found that transformation of organizational operations to improve social and economic sustainability indicators critically depends on administrative support and cooperation with academic staff and facility management.

In this paper, we discuss and propose unconferencing as an approach for facilitating organizational learning and thereby organizational transformation processes. The paper will present a case study of a large Swiss university (Swiss Federal Institute of Technology, ETH Zurich) which used unconferencing as method to engage students together with academic and non-academic staff and external experts into a mutual learning process (Scholz 2000) aimed at the creative development of project proposals for reducing CO2 emissions caused by the campus operations. The processes and outcomes of the unconference are described and analysed for investigating whether and how unconferencing can facilitate organisational learning.

2 Organisational learning for sustainability: Challenges

Pedler et al. (1988) describe a learning organisation as an entity which facilitates the learning of all its members and continuously transforms itself. A learning organisation has per definition to generate new ideas and propose new, untried solutions to problems, but also to "(…) be able to act on the ideas it generates and to evaluate its ideas, rejecting those which are unsuitable" (Denton, 1998: 16). This implies that traditional universities wishing to transform into sustainable universities will have to unleash the potential of all members in idea generation processes but also to ensure that ideas generated will become objects of organisational decision making processes which evaluate, select and implement those ideas (Luhmann, 2000). Decision and support structures for idea implementation have to be installed even *before* official efforts for idea generation start in order to indicate substantial commitment to a real organizational transformation. Equally important, organizational members' motivation to push ideas forward, to take responsibility for them and to engage into implementation processes has to be encouraged already during the idea generation process. The above discussed implies that organizational learning for sustainability includes transformation of organisational structures and decision making processes as well as individual and social learning processes (developing ideas, engaging etc.).

Accordingly, individual learning is seen as the "necessary but insufficient condition for organisational learning" (Argyris & Schön, 1978; 20), or, as Senge puts it: "Individual learning does not guarantee organizational learning, but without it no organizational learning occurs." (Senge, 1990; 236). In line with that, concepts for sustainability learning highlight that mastering the challenges of sustainability depends on learning processes of individuals as well as on learning processes of social systems at the level of groups, organizations, nations, supranational systems, and mankind as a whole (e.g. Bulkeley, 2006; Dietz et al., 2003; Gudz, 2004; Klein, 2004; Scholz et al., 2006; Starik & Rands, 1995). Consequently, sustainability learning is best understood as a multi-level concept that comprises individual learning as well as group, organizational, and societal learning. Transformative organizational learning as well as policy learning and societal learning on local and global levels are required for the development of values, laws and informal normative regulations that facilitate conditions and generate options for sustainable individual and collective behaviors (Dietz et al., 2003).

In this paper we focus in the first instance on sustainability learning processes that happen within organizations at individual, group and organizational level. From the theoretical standpoint outlined above, the transformation from a traditional into a sustainable university requires collective agency (Bandura, 2001) involving socially coordinated and interdependent efforts for promoting sustainability oriented behavioral, social, technological, and economic changes. Hence, most of these efforts do not emerge out of the blue and without legitimation. The particular importance of sustainability for organizational survival and the need for an organizational transformation have to be negotiated and agreed in discursive organizational sense making activities amongst the members of the organization (Watson, 1995; Weick, 1995). This necessitates organisational learning concepts which facilitate mutual dialogue and knowledge sharing amongst the members of an organization (Scholz, 2000). Conference-like events have the potential to act as catalysts or starting points for bringing together employees across organizational boundaries and engage them into organizational learning processes.

3 Unconferencing as a means for facilitating organisational learning

Conferences are common channels of dialogue and discussion that bring together various fields with disparate purposes and are centred round issues framed by various meaning systems embedded in multiple contexts (Hoffman, 2001; Zileber, 2007). Scholars acknowledge the importance of field-wide conferences for joint sense making and strategic agenda setting in emerging fields (Anand & Watson, 2004; Meyer et al., 2005). Yet, conventional conferences featuring lectures, panel discussions and social events such as award ceremonies are focused on presentation rather than discussion of content. They tend to serve political stage setting for topics and introduction of actors as powerful players (Anand & Watson, 2004, Wolf & Troxler, 2008). Presenters and moderators strive for perfection and apply defensive mechanisms that leave only little room for learning by trial and error and open discussion.

For stimulating collaborative and innovative thinking, for utilizing the potential of conference-like events as learning environments and for empowering participants, a departure from standard conference patterns is required. Early alternative concepts to conferencing developed for reaching these objectives are Future Workshops (Jungk & Müllert, 1981; Scholz & Tietje, 2002; Troxler & Kuhnt, 2007) and Open Space Technology (Owen, 1997). Unconferencing is a relatively new alternative to traditional conference formats. The term indicates on the one hand the type of event (conference-like), what may be seen as a tribute to its roots, on the other hand the prefix can be interpreted as a statement signifying a wish or need for change.

3.1 Motivation and principles of unconferencing

The need for an event concept like unconferencing developed out of dissatisfaction of academics and practitioners alike with the outcomes of traditional conferences: Conference participants especially miss opportunities for dialogic learning; beyond presenting and disseminating their own research findings, they want to receive feedback, gather new ideas and share lessons learned and best practices (Jones, 2006; Ruley, 2006; West, 2004). As described above, traditional conferences are aimed at providing an overview on the positions in a specific topic area and serve functions of political stage setting. They are not specifically designed for establishing dialogue between different individuals, communities or schools of thought within society (Rebel, 1989) or with developing common solutions to societal problems and empowering participants to put the solutions into action. Unconferencing aims at *complementing* or even *substituting* traditional conferences when there is a requirement for facilitating social change in medium to large groups of participants.

Unconferencing has also been acknowledged as an appropriate concept for the relatively new discipline of Performative Social Science (Guiney Yallop et al., 2008). Performative Social Science has been envisioned by Denzin (2003) as a social science that resembles a performance to become a socio-political act, or in other words: "(…) performance is transformative – it creates social change" (Markula, 2006; 354). To achieve this objective, Performative Social Science applies methods like performance, video, audio, graphic art, crafting, etc. for "(…) creating new spaces in which (…) meaningful dialogue with a wider audience is possible, and so feedback that is constructive and dialogical in its nature becomes feasible" (Jones, 2006; 67).

Unconferencing builds upon principles of Future Workshops and Open Space Technology and adds Performative Social Science methods and tools (Roberts, 2008) for facilitating social and organisational change by exploiting the potential that conferences provide as communication

environments. It aspires to engage participants with different professional backgrounds into meaningful dialogues about the future of the respective organisation or society, thereby paving the way for organizational and social learning and change. All situational components of an unconference are based on the architectural principles for constructivist learning environments (Baumgartner et al., 2000), namely reflection in action and reflection on action (Mandl et al., 1997), definition of complex problems in diffuse initial situations (Schön, 1987), authenticity and embedding the problem in a real life situation (Chaiklin & Lave, 1998), and enabling to take responsibility step-by-step, i.e., legitimate peripheral participation (Lave & Wenger, 1991).

3.2 Epistemological roots of unconferencing

Epistemologically, unconferencing roots in the psychology of knowledge (Mead, 1972) and symbolic interactionism which developed from it (Blumer, 1973), Luhmanns' social system theory (Luhmann, 1984) and social constructionism (Gergen, 1985). The conference format supports both systemic (organizational, societal) and individual learning processes that

1. enable the transformation of systemic structures and decision making processes through facilitating the creation of structural links between subsystems (structural condition for system learning).
2. facilitating individual and social learning processes in terms of perspective taking between participants as well as individual knowledge transformation (socio-cognitive condition for system learning).

Figure 1 presents our unconferencing model which is described in its application to organizational learning processes in more detail below:

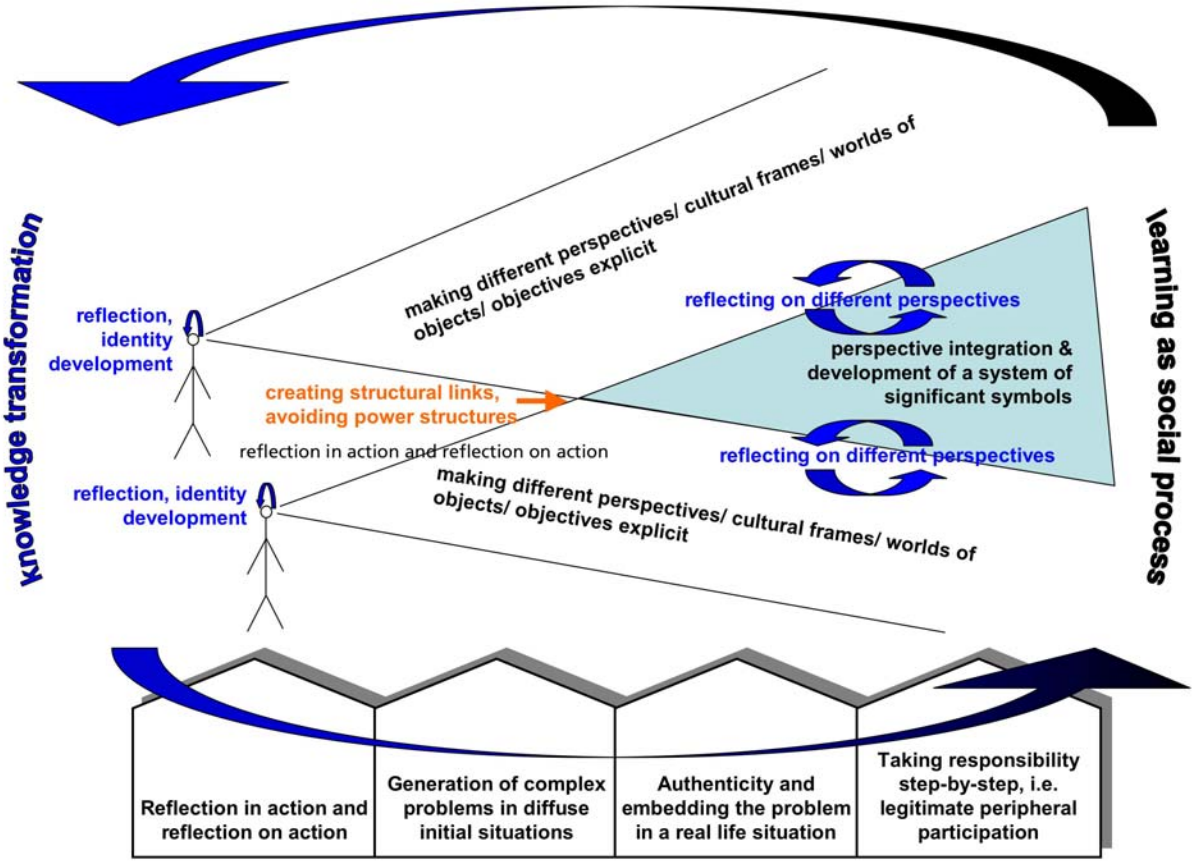

figure 1: Unconferencing model (Wolf & Troxler, 2008, reproduced with permission)

At *organizational (system) level*, unconferences use methods specifically designed to avoid rituals of power, status and hierarchy. Particularly, they systematically break away existing power structures, prevent the build up of new ones and create new structural links in the organization through fostering communication between participants from different organizational subsystems such as departments and functions (Wolf & Troxler, 2008). This stimulates learning across boundaries of disciplines or specialisations (Leonhard, 1995; Carlile, 2002, 2004) as organizational members have to negotiate and define shared significant symbols (Abels & Link, 1999). A shared understanding of the unconference topic – in our case sustainability – potentially leads to a better *connectivity* of communications between organizational subsystems (Luhmann, 2000) and an increased readiness to change organizational structures and decision making processes. The consequent application of methods like continuously assigning communication partners at random and of exercises which support the identification of commonalities as well as of differences in points of view helps to constrict the influence of powerful organisational groups like managers or specific departments (Carlile, 2004; Hansmann et al., 2009) in favour of a jointly created vision.

At *individual and social level*, unconferencing supports *perspective taking* (Mead, 1972) by stimulating processes of *identity development, self reflection and social interaction* among conference participants. Instead of 'knowledge transfer', the term 'knowledge transformation' seems suitable to describe these processes as it highlights the reciprocal aspiration of the partners of a communication process to *integrate perspectives* (Dewe 2005). Knowledge transformation is defined as "*the process of altering current knowledge*" (Carlile, 2002; 445), a complex process that goes far beyond the mere transfer of abstract bodies of knowledge (Osterlund & Carlile, 2005; Lave & Wenger, 1991; Engeström, 1999). During unconferences, knowledge transformation is supported in a first step in performative exercises like crafting or drawing where individuals have to make their own perspective on the topic explicit. In a second step, participants have to put themselves in the place of others (Mead, 1972) for validating the own perspective in the light of other participants' perspectives, e.g. from other departments or functions. This triggers associations, combinations, and syntheses of information that was formerly dispersed in the organisation, and thus facilitates the development of innovative ideas (Nonaka & Takeuchi, 1995). As participants engage together in developing not only visions but also concrete projects and proposals for reaching the envisioned situation, they are more willing to take responsibilities for ideas and engage into implementation processes (Lave & Wenger, 1991).

To sum it up, unconferences have the potential to facilitate organisational learning and change because they create a communication environment which takes care for the two conditions for organizational learning: At structural level, unconferences support the transformation of organisational structures and decision making processes through facilitating the creation of structural links between organizational subsystems. At socio-cognitive level, they facilitate individual and social learning processes in terms of perspective taking between organisational members and individual knowledge transformation. The next chapter will present the results of a case study at a large Swiss university in the transition phase from a traditional to a sustainable university which applied unconferencing for developing in a participatory process implementable project ideas for reducing its CO2 emissions.

4 The case study: organisational learning for CO2 reduction

ETH Zurich, a big Swiss university, produced in 2007 1.5 tons of CO2 per capita/year and wished to reduce it to 1 ton per capita/year (ETH Life Print, 2008). In November 2008, the university ran a 24-hour unconference with approximately 110 students, professors and environmental experts participating. The aim was to generate project ideas that would be feasible to implement in the organisation and lead to a reduction of CO2 emissions.

4.1 Event design

The event was designed as follows:

1. The event started at midday with a general introduction by the university's vice president followed by a *domain mapping* exercise aimed at creating a common understanding of the topic domains future projects would have to address. Already during registration process, participants signed in for one of the five domains i) sustainability in general, ii) water, iii) energy, iv) mobility and v) waste. At the event, they were distributed in groups according to their interest and worked out large wall papers highlighting issues in their topic domains as well as links between the domains.
2. The domain mapping was followed by a *networking exercise* where participants met in a moderated process and talked to at least five other participants whom they have not known before. This step aimed at giving people an understanding about who the other participants were, at making them feel more comfortable, creating ties between them, breaking up existing groups and connecting people with similar interests and ideas.
3. The next step was an *idea market* where people first described their ideas shortly on dedicated sheets. They then presented their ideas to the whole audience, thereby identifying people with similar ideas and connecting to them. Idea sheets were then exhibited on the walls and participants were given the opportunity to talk to idea owners and subscribe to ideas to form project teams. During this phase, from 50 initial ideas 17 project teams emerged who have been facilitated to plan their work until the next day.
4. The idea market was followed by a *networking reception* where business people and experts came in and helped the student groups with sharpening their ideas. This was followed by a *dinner*.
5. After dinner, *work in project groups* started. The proposal format and requirements were introduced to the groups and they started to work out their project proposals. Participants were free to work overnight; however the last work groups stopped at 2 am for getting a rest.
6. *Business expert breakfast* was served between 8 and 10 am on the second day. Here again experts joined the students and helped them to mature their ideas. The *project maturation phase* lasted until midday, as project proposals had to be handed in exactly 24 hours after the event started.
7. While a *jury* of university professors and CO2 experts from industry evaluated the proposals, students presented their work to each other and acted as a *peoples' jury* who selected the two most popular project ideas.
8. Two hours later, the jury presented the winning projects in an *award ceremony*. The event closed with a reception.

4. 2 Event evaluation – research questions and methods

During our case study, we focused on the following three major research questions:

1. *Systems Connectivity:* Does unconferencing support the creation of structural links between participants from different organisational (university) sub systems? Is the process taking place in a power free environment and does it lead to better system connectivity?

2. *Mutual learning:* Does unconferencing support perspective taking, creativity, knowledge sharing, synthesis and transformation of knowledge, and if so, how?
3. *Performance and Outputs:* Is unconferencing a method applicable for facilitating transformations towards sustainable universities? Are the ideas (project proposals) which have been generated during the unconference viable, creative, and cost-effective?

Our research questions address different effects of unconferencing at organisational, social (group) and individual level. We therefore developed an exploratory research design which allowed us to gather complementary data at the different levels. Hence, we triangulated (Denzin 1989, Flick 1992) qualitative research methods, namely a) participatory observation, b) narrative interviews, and c) a participants' survey:

Participatory observation: Seven researchers participated in the event in the role of observers-as-participants (Junker, 1960; Gold, 1958). Conference participants were informed that there were researchers observing their actions and communications, but the identity of these people remained wholly concealed. The aim behind this ethnographic research approach (Hammersley & Atkinson, 2007) was to shed more light on how social order in unconferences is (self-)generated in and through its practices (Holstein & Gubrium, 2008). The researchers used a structured observation guideline for documentation, which they filled in for the different phases in the overall group (domain mapping, networking, idea market) and five different phases of project work (starting phase after dinner, after the first two hours, after breakfast the next morning, two hours after breakfast, 30 Minutes before hand in of proposals). They utilized different observation guidelines for the phases in the overall group and the project work phases (see Annex A). These guidelines represent our operationalization of effects of power structures, the creation of structural links, individual knowledge transformation and social learning during the event into observable individual and social actions.

In **narrative interviews** (Schütze 1977), 20 participants were asked to reconstruct their individual experience during the unconference. The interviews were held right after groups handed in their proposals. By asking respondents to tell stories without offering any elaborated categories or concepts, the narrative interview technique provides access to experiences that constitute the everyday reality of the narrators (Bryman et al., 1988). By emphasizing and repeating specific aspects and interpreting certain occurrences, the narrator's frame of reference regarding innovation becomes accessible. The interviewees have been asked the following question to stimulate the narration: "Mister/Miss…, I would like to ask you to tell me what happened to you during the last 24 hours. Please start with the situation at the beginning of the event and describe thereafter everything that happened during the event until now." The interviews have been analyzed with a classical text analysis method (Miles & Huberman, 1994) for exploring what effects of unconferencing the participants experienced during the event. Individual experiences expressed in the interviews have been related to the research questions.

At the end of the unconference, participants were asked to fill in a **participant survey** (Lamnek, 2005) on the event. The survey contained seven quantitative questions where participants have been asked to rate on a Likert scale from 1 (very much) to 4 (not at all) how much they have been satisfied by the overall event, the work in their project groups, the jury's decision, the place and the catering as well as to what extent the event met their expectations in terms of content and method. Four further qualitative questions asked what the participants learned during the event, what their major benefit was, what they would suggest to change in the organisation/design of the event and how they felt right after the event.

As explained above, we aimed with our research design at gathering complementary data for answering our research questions. Chapter 5 below summarizes the findings.

5 Findings

The participant survey was handed in by 48 of the 110 participants (44% return rate). Quantitative questions on the overall event, its content and the facilitation methods applied displayed a *satisfaction level of more than 90%* (answers 'quite a lot' or 'very much' satisfied). Similarly, in the parts where participants summarized their experiences in the narrative interviews, they highlighted that they *liked the event* very much. Another important topic in the narrative interviews was the atmosphere that was described as *open, creative* and *supporting idea sharing*, or, as one participant puts it: *"I perceive it as a really cool open source atmosphere."*. People liked the large room without tables and chairs for the interactive sessions, and they enjoyed the decoration. They also *felt esteemed* by the organizers and the service personnel, apparently an unusual experience for students which has been highlighted several times. For example, one student said she felt "*like the people in suits and tie which I usually see from the hall*". Participants also liked the good humour in the group.

When telling what happened to them during the last 24 hours, interviewees talked *about the first phase of the event* until the end of project team formation *much more than about the proposal development phase* in teams. It seems as if they collectively divided the event into two phases: the creative, interactive and easy phase in the big group with all participants and the serious and hard working phase in the project groups. While everybody talked a lot about the first phase and half of the participants remembered even in detail all sub activities of bigger tasks (domain mapping, networking, idea market) – except the opening speeches (!) –, the work in the project teams was described very shortly. We assume that this is an effect of the first part being unusual to them, while they are used to project work which is a standard work process in their studies.

5.1 Systems connectivity

One aim of our research was to understand whether unconferencing supports the creation of structural links between participants from different organisational (university) sub systems and if so, whether this process is taking place in a power free environment and leads to better system connectivity.

Observers explicitly documented their experiences with the creation of structural links and power relations. During the whole event, they did not observe a single exclusion of participants due to first level classifications (the clothes, the experience, the voice etc. of others). Observations show that existing group structures have been systematically broken up during the first phase of the event, that a lot of communication took place between people from different disciplines and that new groups emerged during the idea market.

Findings from the survey and the narrative interviews support the observation results. In their qualitative answers to the survey, participants highlighted that they benefitted most from meeting other people through the networking exercise (28 answers). During the narrative interviews, the networking exercise has been praised by most interviewees for supporting them in *getting to know other people* from other departments and disciplines, *engaging into intensive dialogue* with them, identifying participants with *similar issues and ideas* and developing a feeling of *group belonging*. Observations also show that during the work in the

project groups, roles in the groups emerged due to the expertise of people instead of a professional status (like Dr., Prof. etc.) and task assignment happened rather by volunteering than by orders.

5.2 Mutual learning

We also wanted to investigate whether unconferencing supports perspective taking, creativity, knowledge exchange, synthesis and transformation of knowledge, and if so, how.

From our data, we found that social learning and knowledge transformation are closely related. In their answers to the qualitative questions of the survey participants stated they enjoyed *working on own ideas and bringing them forward* (8 answers) and experiencing a *large group* moderation process (16 answers). They furthermore acknowledged that their *major learning gains* resulted from *capitalizing on other people's expertise* what enabled them to *generate new ideas* in the thematic area of CO2 reduction (20 answers). They additionally confirm an increase of their *capabilities for working effectively in a team* (19 answers). From the narrative interviews, we found that both, *facilitation* and the *willingness to actively engage* in conference activities, played a major role for social learning and individual knowledge transformation.

A lot of positive aspects of **facilitation** have been mentioned in the narrative interviews especially concerning the first phase of the event in the large group. One motivation to participate in the event mentioned by half of the interviewees was *curiosity* concerning the conference format. As they never participated in an unconference before, they had no clear idea about what would happen and how the event would be designed in detail. When reconstructing their experiences, interviewees highlighted that facilitators excellently *structured the event* and *guided* the open innovation process. Or, as one of the participants puts it: *"It is one of the best workshops I ever attended because you know, everything went so in order"(sic!)*. Participants underlined that facilitation enabled participants to *exchange ideas, to make points of view explicit, to bring in own ideas* and to *develop them further*. One third of the interviewees reported learning effects related to the positive *impact of the different methods* applied during the unconference on the event results because these methods fostered the formation of motivated and competent project teams and in consequence the development of high quality proposals.

The major motivation to **engage** in the event was for the majority of the participants *to impact the way the university deals with CO2*. They strived for developing and implementing own ideas. This is also reflected in the strong orientation towards developing projects as well as master and PhD theses out of the work done at the event; most participants did not just come for a two day event but aimed at making their project happen afterwards. The willingness to engage in event activities clearly impacted what participants reflected upon and were able to learn, in other words to how far individual knowledge transformation took place: Those who aimed at implementing their own ideas described the process of *convincing other people* to join their team as intensive and sometimes even exhausting. One third of the interviewees reflected their *role as idea owner* and reported learning points about *own competences* (like being precise, providing good arguments, leading group discussions etc.). Reflection has been in general indicated as *important trigger for changing own behaviour*. For example, participants who did not indicate clear preferences and competences felt that finding interesting communication partners during the networking exercise was difficult. Several interviewees report that they reflected upon the issue and changed their behaviour for the

following idea market phase: Here, it was important to them to formulate ideas and how they could contribute to them in a very clear manner.

The amount of active participation strongly impacted on *how time was sensed* by the participants. Almost half of the interviewees mentioned that although the first interactive phase lasted four hours, they *totally lost track* of time. Another 1/3 valued the first part of the event a lot but always felt that they should *start working now*: These participants usually arrived at the event with a strong vision of an idea and some followers to form a team and were very keen to work on the idea. Two interviewees who reported that they *did not engage* actively in several tasks felt that these tasks *took too much time*.

We found in the narrative interviews that *cooperation* happened between participants with *similar ideas* and that a *common vision* of the project idea emerged from intensive discussions. Findings from the observation show that in project teams, participants actively listened to each other and presented even unfinished ideas. There is not a single project group where participants kept the initial idea without modification. Instead, participants *discussed different opinions and developed a common project vision* which was different from the initial idea. This indicates a *social learning process* involving *adaptation* of initial individual viewpoints (knowledge transformation). Misunderstandings were regularly perceived as such and discussed; *criticism was formulated in an objective manner*. Another effect of social learning mentioned by all participants was the one of developing common project team working routines enabling then to cooperate *in the morning better than the evening before*.

5.3 Performance and output

Our third research question asked: Is unconferencing a method applicable for sustainable universities? Are the ideas (project proposals) which have been generated during the unconference viable, creative, and cost-effective? Within the 24 hours of the event, the participants developed 17 project proposals which were all eligible for evaluation and entailed realistic ideas for CO2 reduction at the university. The project ideas ranged from the Eco-Paparazzo, an internet portal to pillory energy waste, to construction measures (e.g. implementation of heat exchangers, use of solar- and wind energy) and technical tricks like a better switch-off of the standby modus (ETH Life Print, 2008) or a behaviour change project called “choose stairs – not lifts”. A list of the winning proposals with brief descriptions is presented in Table 1 below.

Table 1: List of winning proposals (cf. ETH Life Print, 2008)

Project title	Short description
Printing System Improvement	Each member of the university prints 4000 pages per year. By consequently using two-sided print outs and reducing unnecessary prints, the university would save 150000 Swiss Francs/year.
Trainforplane	Actually flight booking is not handled by a central unit but by the university departments. A consequent management which informs prior to each flight booking about travel alternatives like taking night trains or video conferences has a high potential to raise awareness amongst the university employees on CO2 emission issues and to help reducing flights.
Eat less CO2	At the moment, 15 % of the energy used at the university result from activities related to food preparation. The project presents a concept which would allow for more economical planning and opts for the consequent usage of local products and more fruit and vegetables

	instead of meat, thereby reducing the energy needed for food preparation (and production).
PUBLICA Low Carbon Fund	Eco-friendly investment of pension funds with the potential to compensate the CO2 footprint of the institution about four times.

These proposals are now followed up and will partly be implemented through corresponding projects and measures. Experts from the jury acknowledged that the number and quality of ideas was extraordinary high (ETH Life PRINT, 2008) which suggests that unconferencing is a very viable method for developing high quality project proposals in a relatively short period of time. In the narrative interviews, several interviewees talked about *enthusiasm in their group to implement* the proposal developed and high interest in the (upcoming) *decision of the jury*. One of them pointed to the need for investment by the university for implementing the ideas. Most interviewees express *pride* in the results of their work. Similarly in the participant survey, 11 participants affirmed their motivation to continue to work on their project after the event (without having been asked about this motivation).
The university made a serious investment of about 0.5 Million CHF into the build up and maintenance of structures for supporting the implementation of the project proposals. These structures have been built up before the event: The university initiated a team called ECOWORKS which consists of environmental consultants from a university spin off, members of the student association for sustainable development, representatives of the Environmental Fund of the university and a marketing agency. Together, this team developed an online platform aimed at being the place where project proposals for CO2 reduction would be handed in, discussed and followed up. The unconference was also the kick off event for the ECOWORKS platform. Already before the event, ECOWORKS members have been assigned to support student groups afterwards with project implementation. So far, 3 projects have been implemented; overall 9 projects are expected to finish the implementation phase until autumn 2009.

6 Discussion and conclusions

From our findings presented above, we can draw the following conclusions concerning our research questions:

First, in the case study presented unconferencing supported the creation of structural links between participants from different organisational (university) sub systems and led to improved system connectivity. Especially during the first phase, a lot of interdisciplinary contacts were established. Participants developed a feeling of belonging. We have also been able to show that discussions took place in a power free environment, participants engaged into the different processes openly and roles and tasks have been assigned due to expertise instead of status. In the project groups, everybody's voice was esteemed.

Second, we were able to show that participants engaged in a mutual learning processes amongst participants. We identified different processes of perspective taking, knowledge sharing, development of common ideas and individual knowledge transformation based upon self reflection. We also found that facilitation was important to bring these effects about. Especially the application of methods and tools from Performative Social Science in the first phase of the event enabled participants to open up and develop and share ideas. The individual engagement impacted the experiences made and the learning outcomes of people. Even participants who did not engage very actively into networking experienced its effects: How one participant puts it, the "*networking happened automatically, people came and talked*

to me". However, it seems as if active participation stimulated reflection, and especially idea owners who organised a project team for their idea talked a lot about their learning gains during the process. Individual knowledge transformation was always strongly linked to social learning processes, an effect which we found especially in phases where ideas have been developed, merged and negotiated in the project teams.

Third, the unconference developed within 24 hours 17 high quality project proposals that can now be implemented for transforming the university towards lower CO2 emissions. As the university did put up structures for following up and implementing project proposals before the event, there seems to be a good chance for transforming the project proposals into activities for reducing CO2. The unconference was a first step on this way. However, it did not only produce project proposals but also generated motivation amongst the participants to implement these projects.

In summary, these findings have shown that unconferencing can be an appropriate format for facilitating organisational learning aiming at the pro-sustainability transformation of a large university. They show that unconferencing actually achieved systems connectivity, enabled mutual learning and probably outperformed more traditional formats in terms of output on this occasion. It is certainly plausible that the basic aspects and methodology of unconferencing are not confined to the topical domain and type of organization that were addressed in this case study. Certainly, unconferencing can equally be used for enhancing other organizational learning processes that critically depend on systems connectivity and mutual learning.

Yet further research is needed, particularly on a meta-level, to trace the effects of unconferencing across a range of domains and organizations. Likewise, the influence of unconferencing as a method as compared to the actual skills of the facilitating teams would need to be investigated. Finally, the question needs to be addressed under which circumstances unconferencing might or indeed might not be the most promising approach to achieve transformation goals, as compared to more traditional methods of facilitating transformation and societal and/or cultural change.

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Annex 1

A) Observation guideline for phases in the whole group

Phase in the overall group							
name of observer							
Atmosphere in the group				bad	rather bad	rather good	good
0 Are participants excluded because of first level generalizations (due to their appearance, their language, voice, clothes)						yes	no
1 Does each participant talk to everybody else?						yes	no
2 Is the contact between participants stimulated systematically?						yes	no
2.1 In case of yes, by which means?							
3 Are contacts between participants with different professional backgrounds established?				never	seldom	often	regularly
4 Do people leave existing groups?						yes	no
5 Do new groups emerge?						yes	no
6 Do participants engage actively?		a) Who					
				nobody	some	most	all
		b) What	ideas				
			opinions				
			expert knowledge				
			criticism				
		c) frequency		never	seldom	often	regularly
7 Do contacts between participants with different professional backgrounds emerge?					never	seldom	often
8 Are participants adressed with titles (Dr., Prof.)?						yes	no

B) Observation guideline for project phases

project phase							
		Group participant number	professional background	nationality	gender	language	
	name of observer	1					
		n					
Atmosphere in the group							
				bad	rather bad	rather good	good
Power structrues							
0 Are participants excluded because of first level generalizations (due to their appearance, their language, voice, clothes)						yes	no
1 How emerge group structures:							
1.1 Dominate participants becauseof their status instead of their expertise?						yes	no
1.2 How emerge group roles?				because of expertise			
				because of status (Prof., Dr. etc.)			
				other:			
2 How are tasks distributed?				because of expertise			
				because of expertise			
				other:			
3 Do participants dissociate themselfes from others (verbal or through their behaviour)?				never	seldom	often	regularly
4 Is own knowledge strongly empahzised?				never	seldom	often	regularly
5 How often do participants use killer phrases?				never	seldom	often	regularly
6 How often do participants interupt each other?				never	seldom	often	regularly
7 Do participants mention unfinished ideas?				never	seldom	often	regularly
8 What mechanisms are used for agreeing a group opinion?				discussions			
				votings			
				others			
Making perspectives explicit							
9 Do participants engage actively?		a) Who					
				nobody	some	most	all
		b) What	ideas				
			opinions				
			expert knowledge				
			criticism				
		c) frequency		never	seldom	often	regularly
10 How do participants formulate criticism?				objective/ stick to facts			subjective judgements
Listening actively							
11 What types of reactions follow statements?			verbal				
			gestures, mimic				
			actions				
				never	seldom	often	regularly
12 Do participants explicitly ask for furhter details?				never	seldom	often	regularly
Developing common perspectives							
13 How do participants deal with different opinions?				discussions			
				votings			
				others			
14 How are ideas developed?				taking over the original idea			discussion of different inputs
15 Is there a common understanding of ideasr?						yes	no
15.1 In case of yes, how does this common understanding manifest itself?							
16 Are there a lot of misunderstandings?						yes	no
16.1 In case of yes, what happens?				They are ignored			
				They are dicussed			
				They are not perceived			
17 In case somebody leaves the group, what has been the reason?							
Self reflection							
18 Do participants critically reflect own opinions and behaviour?				never	seldom	often	regularly
19 Do participants change their role over time?						yes	no
Other notes							