Students leading Collaboratories: University of St.Gallen

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Context and overall objectives

At the University of St. Gallen, we used the Collaboratory as the guiding principle and method for a 12-week Master course “Strategies for Sustainable Development” in Spring 2013. It sought to address and resolve 3 critical sustainability issues on a local level (creating a break-through for climate-friendly food, promoting the bicycle as a viable mobility alternative in the city of St.Gallen and at the University, making tap water the favorite drink in Switzerland). Each issue was introduced in one session followed by two collaboratory sessions which took place every 3 weeks. The Collaboratory 1 uses all three phases of Scharmer's Theory U (downloading, visioning and prototyping). A crucial element of Theory U is the visioning process, as it directs the attention and intention from a past space of experience to a future space of possibility. The Collaboratory 2 shows an important continuation and deepening of the Collaboratory 1.

This chapter presents a detailed description of our Collaboratory approach and process for 50 students split up into three groups of equal size. The Collaboratory can be run with much smaller groups making the organization easier. To illustrate the process we will provide detailed descriptions of the Collaboratories 1 and 2 and hint at some of the outcomes (in the text boxes). We hope that our process, experience and learning serve as inspiration for others who wish to use the Collaboratory approach in an educational setting.

Collaboratories are live processes, which cannot be predicted or planned in all detail in advance. It is important to remain open and flexible. Being prepared extremely well is a pre-condition for being flexible. A collaboratory is a careful collective improvisation rather than a strict procedure. Being spontaneous and having fun is very important for a creative atmosphere. Everything will happen as it should – and you cannot do more than being well prepared. The organizing team will help each other spontaneously and support those in need of help or getting stuck.

Introductory Session

The professor invites three subject matter experts to introduce the topics and related challenges (climate-friendly food, bicycles and tap water) in an introductory session.

The invited experts included the CEO and founder of a start-up offering climate friendly food services, the head of communications of the Swiss Association of Water Works, the Head of Slow Mobility of the City of St.Gallen and the Head of Infrastructure at University of St.Gallen. The tap water issue is used in the remainder of this chapter for illustration purposes.

The Q&A part of the introductory session was particularly important to reveal crucial issues related to the topic and stakeholders to be invited for the Collaboratory sessions. Each of the (3 hour) sessions is prepared, facilitated and evaluated by the student team in charge of the topic.

In the follow-up to the Introductory Session a crucial task for the student group is to structure the issues and to invite stakeholders to the 2 Collaboratory sessions representing the real issues at stake. The depth and relevance of the debate, but also the degree of engagement of all participants are directly correlated with the presence of the relevant stakeholders.

In the tap water collaboratory e.g. the stakeholders present were the Head of Communication of the Swiss Association of Water Works, the General Secretary of the Swiss Association of the Mineral Water Industry, the Head of Quality Assurance of the St.Gallen Water Works and the manager and cook of a popular St.Gallen restaurant.

Collaboratory 1

The objectives of the Collaboratory 1 are:

- Understanding the issue/challenge/problem and its context
- Developing a comprehensive overview of all perspectives concerning this issue
- Creating a group engagement process through the collective visioning process which sets the stage for overcoming polarities and opposing views through the emergence of a group consciousness and the embodied experience of all participants
- Further developing a vision of what the world would look like if the issue was resolved
- A first round of ideas of how we could make concrete steps in resolving the issue at hand (using the method of back-casting, e.g. starting with the future and working back to now).
- Providing a set of concrete “proto-type” ideas that can be developed further in a next session

The net process time is designed to be completed within 3h (180 minutes). Additional time is required for set-up and clean-up (before and after). It is smart to reserve a room for at least 4h. The Collaboratory 1 process is structured in 6 steps.

1) Set-up of room (for approximately 50 participants) (Student team)

The team in charge (a student group of 15 students, they should be no less than 5) prepares the room and ensures that all the required tools (talking stick: can be a microphone, a stone or something else) and support materials (phase 1-3 visuals, previously prepared) are brought to the location. 2 students act as coordinators of the team throughout the different phases of the collaboratory.

5 (or 6) chairs are placed in the middle of the room in a circle (one chair per expert, one student member from the group plus one empty chair). Around this inner circle 2 bigger circles of chairs are formed (in two rows), whereby every 4 to 5 chairs a gap is left open so that people can get to the inner circle without obstacles. Those gaps should be small enough, however, to create the overall picture of well-rounded outer circles.

4 flipcharts (with a lot of paper and colored pens) are placed behind the circles with 4 students placed next to them for taking notes.

In the middle of the inner circle a talking-stick (or stone) is placed on the floor.

At the walls of the room, on flip chart papers (but not on the flipcharts themselves) the central question or issues discussed, the objectives of the collaboratory and the “theory U” process should be represented in a clearly visible form. They were prepared before-hand.

The professor is informed in advance who are the 2 coordinators, the note takers, the team leaders and supporters (see step 5). It is crucial that the group organizes itself internally from the start and is fully aware of this challenge. They should come prepared very well with clear responsibilities, with moderation guidelines and tools ready.

The student team had autonomously organized a blind tasting of tap water and a popular silent mineral water, the results of which were presented during the introduction. Tap water turned out as being the preferred water.

2) Introduction (Professor and Coordinators: 15 - 25 min.)

The session begins with a 5 min. introduction into the collaboratory process by the professor. This is followed by a short introduction of each expert in the inner circle.

The group coordinators then present a succinct summary of the topic and the challenges to be addressed. This can be a short film, a summary, collection of points of view or anything else that sets the stage for the following discussion (10 to max 20 min.).

3) Downloading (Professor and Student Team: 60 - 75 min.)

The downloading step consists of 2 parts:

- a) An exchange of the experts in the inner circle, whereby their different perspectives are presented and taken note of (“downloaded”). These perspectives are compared and discussed among the experts (some 40 – 50 min.).
- b) This is followed by a deliberate and active involvement of the participants in the outer circles, to gain further insights, questions and ideas, but also to draw as many participants as possible into the discussion (20 – 25 min.).

The downloading is guided by the professor and documented by the student team. The coordinators guide the four writers at their flipcharts and are responsible for summarizing the key insights at the end of this step. From this results a rich picture and deep understanding of the issues at stake and the positions of the different stakeholders. For the summary a separate flipchart-paper should be used. The designated team leaders of step 5 (see below) take notes, to make sure the results are well captured.

4) Visioning (Professor: 30 - 40 min.)

In the first part of step 4 (approx. 10 min.) the professor guides the visioning process in which the participants get out of their heads and dive into a deeper level of the „group consciousness“. The objective is to change the inner space from the past to the future and to allow images of a future

world to emerge in very concrete and specific ways, in which the issue at stake has been solved. It is important not to include leading assumptions in this process but to enable each and every participant to pursue his/her own personal visioning journey through the development of inner images, sounds, etc. which are anchored through physical experience (see Otto Scharmer's Theory U).

The guided journey ran like this: "Imagine a world where tap water has become the new normal in St.Gallen and in Switzerland. Picture such a world. Let real situations of your world appear, with specific pictures, colorful images, moving pictures. Imagine what this world looks like when you are at home and drink something. What does it look like at breakfast, at lunch, at dinner. May be you have friends over at your place and go out for drinks later? What does your life at home look like? What strikes you as different? What does everybody drink? How do they drink it? How is it being served? Where is stored? Where does it come from? What does it look like? How does it feel? What do you see, hear or smell?

Now you go to school, on your regular way. May be you stop by at the café bar and get something to drink? What does it look like? In which way is it different? What do you drink? What do the others drink? Do they serve tap water? How is it being served? What does it cost? How popular is it? For lunch, may be you go to the cafeteria. What does it look like there? What do you drink? What do the others drink? What role does tap water play?

On your way home you may stop at the super market, or where you usually shop. You go the beverages section. What strikes you as different in this new world? What do the beverages look like? How are they being presented and marketed? Where do they come from? What do you buy? What do the others buy?

In the evening, imagine you go to a restaurant with friends. Imagine your favorite restaurant and look at the beverages listed in the menu. What is different in this new world? What do they offer? At what price? You order tap water. How does your server react? How do your friends react? How do they serve the drink? What does it taste like? How do you feel?

Back home you read the newspaper or watch the news. What do you note concerning beverages, water and tap water? What topics and issues are dominant? How do you react to them? Are you surprised about what you read? Why? What thoughts pass through your head?

Now we leave this future world where tap water has become the new normal and return to Switzerland, to St.Gallen and into our today's world."

The visioning phase is critical to the whole process as the majority of the participants will not be familiar with and used to this kind of experience. Therefore, it should be facilitated by the person most comfortable with this, most likely the professor. It is important that there is total silence and that nobody moves around or leaves the room. All cellphones have to be turned off (it is probably better to mention this already at the beginning of the session). The members of the student team in charge take a seat and participate, too. The team discretely helps to ensure the silence and concentration needed.

In the second part of step 4 (approx. 30 min.) the visions and images of all participants are shared. This is done by handing over the talking-stick from one participant to the next, so that everybody can share his/her vision. This is done by the person who conducted the visioning. 4 team members document the contributions on flip charts, supported by the two coordinators. The challenge is to ensure a fast documentation (for example by picking up one input after the other clockwise from one flip-chart

writer to the next). This process should be defined in advance, so that the documentation process does not need to be commented on publicly.

The coordinators' task is to create a coherent vision of the colorful images, stories and impressions shared (not a very easy task). Therefore it may be useful to prepare a flipchart sheet which can be glued or written on. The designated group leaders of step 5 are taking notes to ensure continuity.

5) *Harvesting (Coordinators and Group Leaders: 30 - 40 min.)*

In step 5, the results of the visioning process are connected to the overall objectives of the collaboratory to define specific starting points for action ("harvesting"). All participants now split up into groups of at most 8 members, with each group being led by one team member with one additional team member taking notes. The coordinators ensure that all groups have about the same number of participants and that the stakeholders/experts are equally spread over the groups (the art lies in explaining this as simply as possible). Each of the new groups form an own circle and take a seat around one of the flipcharts, situated in the corners of the room. The purpose of this phase is to collect first rough ideas for prototypes that will be worked out in collaboratory 2.

Each group leader starts out by summarizing the vision as an experienced but relatively abstract image. It is recommended that the group leaders go to their flipcharts already at the end of step 4 and write down the key issues which are summarized by the coordinators. After this, the key insights from the Introductory Session are brought up again. The group leaders may have prepared this on a flipchart or on a separate piece of paper. The crucial question in this phase is: „What can the different stakeholders, including the students, do concretely in the next 3 months to work decisively and effectively towards the ideal vision?“

Initially, it is recommended that everyone gets 5 minutes time to reflect silently on this question. Then the brainstorming rules are applied: all ideas brought up are written down without comment (no criticism, no questioning). The group leader starts the brainstorming, moderates it lightly, ensures the overall timing and ends with a short summary.

After some 20 – 30 minutes all participants take their chairs and return to the plenary whereby the chairs are brought into their original position in the big circle. The coordinators now moderate the discussion of the group leaders, who present the results of their respective brainstorming. The goal is to generate and record 10 – 20 key aspects or ideas as input for the Collaboratory 2. This includes also ideas regarding which stakeholders should be invited. These stakeholders will be selected and invited with a view on developing and implementing the emerging practice projects.

Main insights of the harvesting step included:

- mineral water is perceived as a useful alternative to tap water, in particular in situations where tap water is not available/not suitable
- tap water is already being offered in some restaurants, but the customers are typically not ready to pay for the service
- availability of tap water is crucial for tap water consumption
- communication has a central role to play in creating a positive image of tap water, similar to what is being done (there on a massive scale) for mineral water

6) Wrap-up (Professor: 5-10 min.)

The coordinators acknowledge the experts and hand over a small present. At the end, the professor collects short comments from all participants of the collaboratory, its procedure and its results. For this, the team members working on the specific topic are invited to open up the round with short statements. Finally, the professor thanks the student team and their coordinators.

Collaboratory 2

The objectives of Collaboratory 2 are:

- a) Using the „harvested“ ideas of the Collaboratory 1 as a starting point
- b) Developing specific action plans for the most relevant ideas
- c) Involving experts which could implement the action plans

The net collaboratory process time is designed to be completed within 3h (180 minutes). Additional time is required for set-up and clean-up. The Collaboratory 2 process is structured in 7 steps.

1) Preparation (Student Team and Professor)

The team in charge determines together with the professor the prototype ideas from the Collaboratory 1 to be further elaborated and the experts and potential implementers to invite to the Collaboratory. Convincing stakeholders to join includes explaining the larger objectives of the exercise. 2 team members act as coordinators during Collaboratory 2 (may be the same as in Collaboratory 1). 2 more team members are defined as group leaders for each project selected. The professor knows in advance who plays what role.

2) Set-up of room (Student Team) (same as in Collaboratory 1: large circle with experts being placed in the inner circle, at the beginning)

3) Introduction (Coordinators: 20 min.)

The group coordinators welcome all guests and participants, provide an overview of what has happened so far in the Introductory Session and the Collaboratory 1 and what the larger context of the session are. They clarify the objectives for the Collaboratory 2 and outline the planned process. Each prototype idea which has been selected for further elaboration is briefly presented. The estimated impact and the probability of an implementation are explained.

In the case of the tap water project, three priority areas were defined for further elaboration: University of St.Gallen, City of St.Gallen and restaurants.

The experts who take part in the collaboratory and are new to the process receive particular attention. The coordinators introduce the experts by providing a short biographic overview and explaining why they have been invited. This clarifies their areas of expertise and perspectives of contribution.

The invited experts were: Head of Infrastructure, University of St.Gallen; Head of Marketing and Director of the Public Services, City of St.Gallen; General Manager Switzerland of an International Water Dispenser Company; President of the Association of Restaurants, Canton of St.Gallen.

4) Group work to define core ideas (Group Leaders: 45 min)

All participants are split up into groups consisting each of max. 8 people each (bigger teams would lower the productivity) to work on the defined prototype ideas. The groups are formed based on a prior doodle-request. One expert and a potential implementer of the prototype idea is present in each group.

Each group works separately with a flipchart on one topic. All group members take their chairs and gather around their flipchart. Each group is facilitated by two group leaders, with one of them moderating and the other writing.

A professional facilitation includes: welcoming and opening of the discussion, clarification of the goals and rules, facilitation of the discussion, focusing, summary and ending of the discussion. If different groups work in the same room the discussions need to be held in a quiet voice.

It needs to be clear what output is expected from the groups. Therefore a form with goals, results, members of the group, etc. should be prepared by the team beforehand. These forms need to be completed by the group leaders and handed over to the professor at the end of the collaboratory.

The two coordinators circulate between the different teams and make sure that everything runs smoothly: timing is kept and substantial results are produced. For this, a bell app might be helpful.

The following procedure is recommended:

- Short introduction by the two group leaders to the topic, background, goals and own expectations, procedure (5 min.)
- 5 minutes of silence, so that each participant can concentrate and note down his/her ideas concerning the prototype idea
- Brainstorming (the rules should have been explained) (15 min.)
- Reduction of all ideas to the 10 ideas with the strongest implementation potential (5 min.)

- Input of the expert and short discussion on the question which of those 10 ideas are most relevant, realizable and promising? Selection of 5 implementation ideas and summary by the two group leaders for the subsequent presentation in front of the whole class (10 min.)

The participants may want to take a short break (15 min.).

5) Presentation and selection of the best ideas for implementation (Coordinators and Group Leaders: 30 min.)

All participants turn around their chairs and return to the big circle (set-up at the start). The 2 coordinators moderate the session.

The group leaders present their 5 implementation ideas (5 min./group; 15 min. in total).

After each group presentation the whole class selects the top 3 ideas based on a plenary vote (5 min./group, 15 min. in total).

5 ideas for University of St.Gallen and 3 selected (in bold):

- 1. Introduction of water dispensers**
- 2. Improve infrastructure and directions for water faucets/fountains**
- 3. Attractive bottle of water for each student**
4. Information campaign to increase knowledge and awareness about water issues
5. Water week, organized by student organization oikos

5 ideas for City of St.Gallen and 3 selected (in bold):

1. Information campaign to increase knowledge and awareness about water issues (water day)
- 2. Awareness raising and education in pre-schools and schools**
- 3. Improve infrastructure and directions for water fountains and create attractive bottle**
4. Collaboration with local companies
5. **Co-sponsoring with local companies**

5 ideas for Restaurants and 3 selected (in bold):

- 1. Tap water refinements (e.g. different tastes)**
2. Adaption of water dispensers to different locations (restaurant vs. night club)
3. Information campaigns for different cities (St.Gallen water, Zurich water ..)
- 4. National branding for Swiss tap water**
- 5. Harmonization of pricing structures for tap water**

6) Developing definitive action plans (Group Leaders: 40 min)

The groups return to their flipchart in order to develop action plans for the selected 3 ideas.

They split up into sub-groups to work separately on the selected ideas. The issues discussed are: a) the crucial actions and the time needed, b) critical resources/support/stakeholders, c) expected impact of the project (25 min.).

The sub-groups present their results to the whole group. The group leaders sum up the results and record them on the pre-established form (15 min.).

7) Presentation of the results (Coordinators and Group Leaders: 30 min.)

The participants return to the big circle set-up and the group leaders present their results to the whole class. The results consist of clear action plans with suggestions on how to proceed (including points a, b, c mentioned above) (5 min./group, 15 min. in total)

The 2 coordinators sum up the most important results, highlight next steps to implement the projects and end the session (10 min.).

The professor acknowledges the experts and offers a small present. He thanks the student team and their coordinators. (5 min.)

Learning outcomes of the three sessions

The learning outcomes can be related to the following four aspects: the collaboratory method, the student experience, the observed learning and the impact noted by the participants. They have been extracted from comprehensive reflection papers submitted by the students on their key experiences and learning at the end of the course. They include learning outcomes that were mentioned most frequently by the students.

Related to the collaboratory method:

- the method allowed for a much more profound insight, understanding and engagement with the topic than traditional methods; the extent of commitment, engagement, drive and determination of my fellow students to work on these subjects was very high, which is very rare
- the lively and interactive atmosphere inspired a highly active thinking and reflection process; it did not feel like work what we did
- it turned traditional learning methods upside down with a focus on developing visions and practical solutions
- biggest learning effect was due to the amazing preparation of the collaboratories
- initially, the speaking stick reminded me of an educational measure for children, in hindsight, I must admit that it enabled a respectful exchange of positions and made great sense
- I was surprised how constructive the experts were. Their ideas were innovative, even visionary, despite the fact that they held contradicting views
- the open circle created a space where everybody was invited to participate. The professor held back on purpose, thus opening the door for all of us to participate and engage; but not everybody was willing or able to embark on a journey into a visionary future
- I was fascinated by the diversity of proposals emanating from the process. It demonstrated to me the need to have many different stakeholders and perspectives around when we want to come up with innovative ideas.

Related to the student experience:

- I was most skeptical as I have never seen anything similar in my university. Yet I was most amazed about the degree of my own learning and the learning about myself.
- I started to feel more comfortable in the second Collaboratory 1.
- I was astonished about the wealth of creative and innovative ideas of my fellow students.
- I never thought so much learning was possible.

- After the Collaboratory 2 I told my team that I would go to war with them and how deep a level of trust I had developed.
- I spent many hours in my free time to understand these topics better. I experimented with new recipes, new shopping habits, of which are really important for my learning success.

Related to the observed learning by the participants:

- I was required to step outside of my comfort zone and realized that I have never so far critically reflected my own thoughts and actions.
- The course enabled me to drop my mostly legally-formed, fact-based thinking and to embrace a more joyful and creative, naïve approach. I realized that my talent for imagination was very weak.
- I realized that my past experience of mostly having to memorize for exams is not the only form of learning. I have learned a lot by communicating with experts and my fellow students – a totally new and enriching experience.
- I have never worked in such a large group (15) and this has been the best team experience ever.
- My brain got massaged to develop a consciousness for sustainability. This consciousness now flows into many decisions and considerations in the three topical areas: climate-friendly food, mobility and water.

Related to the impacts noted by the participants:

- I realized I had no clue which vegetables were in season. As soon as I arrived home, I printed a seasonal table of vegetables and put it on my fridge. But I also realized that there were a number of things I did not want to live without. I chose to eat less meat and to avoid veggies and fruits from overseas.
- The continuous exchange of ideas with my fellow students resulted in so many ideas that we have now decided to start a start-up.
- It took much courage to contact new people and encourage them to spend their valuable time in our collaboratory. My related learning curve was steep.
- My way of managing the group was much appreciated despite much hesitation on my side.
- We produced 9 concrete ideas of how to solve our issues, two of the experts embraced these and agreed to implement them.
- The concept “my town – my water” will be implemented by the city of St.Gallen – totally amazing.
- Besides the various changes in my own life, I was also able to influence my family and friends: my aunt now receives a weekly local veggies basket and my friends order tap water in restaurants.

Literature and Note:

Scharmer, Otto: Theory U. Leading from the future as it emerges, San Francisco, Berret-Koehler 2009.

The course syllabus can be downloaded from the main author's homepage:

http://www.iwoe.unisg.ch/en/LehrstuhlNachhaltigkeitsmanagement/Lehre?_id=ED3FE263734D445C9AA23754FD11