

Analogies from didactics and moderation/ facilitation methods: designing spaces for interaction and experience

Eva Hornecker

Technical University of Vienna, Austria
eva.hornecker@media.tuwien.ac.at

Abstract

A close analysis reveals parallels in issues discussed within interaction design and issues within group didactics or facilitation methods. Both interaction design and didactics/facilitation can be interpreted as designing spaces for interaction and experience. This article explains how I became sensitive to these parallels and starts to explore some of these. Interpreting them as analogies can provide guiding knowledge to interaction and experience design.

Keywords: experience design, group facilitation, group moderation, pedagogy, trust

1 Introduction

Things you learned in your past form a silent repertoire of knowledge. It awakens unexpectedly if triggered by something familiar or analogous, even though it seemed at the time to be useless for future work. This provides an opportunity to cross borders back onto old ground—or even more—to synthesise the different types of knowledge from disciplined territory.

I am a cross-breed with a background in computer science and pedagogy. My minor subject has been pedagogics, specialising in adult education. Furthermore I worked in the Student team of my University's Higher Education team (a service division for all departments), where I was planning and giving courses on rhetoric, seminars and training on didactics for student tutors, and team-training courses for student projects in software engineering (Hornecker 1993, 1995). Through this work I was introduced to group didactics and moderation/facilitation methods, in particular in the group method of theme-centered interaction (Cohn 1975, Kuebel 2002). This background in social and human sciences eased my studies and research within human computer interaction (HCI) and computer supported cooperative work (CSCW). Lately I became involved with media evaluation and design, focusing on interaction design and cooperative use of media artifacts. When reflecting on system evaluation and interactive system design I found unexpected analogies with group facilitation. A closer look revealed further parallels in issues relevant for interaction

design and for group didactics or facilitation methods. I believe it to be fruitful to explore these analogies in the remainder of this text.

2 How systems embody facilitation methods

In evaluation and re-design of the *PitA-Board* I first stumbled across this analogy which helped me to understand encountered phenomena. The *PitA-Board* is one variant of the EDC system developed at the Center for Lifelong Learning and Design (L3D) which aims to support co-located participatory urban planning. The EDC provides an augmented game board showing a map of the relevant area and allowing tangible interaction with simulations. I collaborated with L3D researchers in the comparative assessment of two system versions (Eden, Hornecker and Scharff 2002). Two groups tested the systems in a role-play, simulating an envisioned use situation of facilitated citizen participation. We found that the system incorporated or embodied facilitation methods in unexpected ways. Seemingly trivial design decisions had high impact on group behaviour, dynamics and atmosphere of the sessions.

Constraints forced people to coordinate actions and, as a result, fostered group awareness and cooperation. Such constraints can consist of shared and/or restricted resources that must be coordinated or of structures encouraging reciprocal helping. Examples from this study are a menu for selecting the interaction mode or a limited supply of tangible tools. From group dynamics it is well known that coordinating and helping improve reciprocal amicability and group cohesion. These situations occurred at the very beginning of the session and initiated (content-neutral) cooperation, which may make people more willing to continue cooperating on more salient issues. Physical or system constraints requiring coordination and sharing

of resources thus embody facilitation methods fostering cooperation and structuring group processes.

Early playful phases of exploring system behaviour had been intended for learning usage of the system. They additionally fulfilled the dual role of appropriating system space and physical space and producing a lively, curious atmosphere. Where such phases were missing, participants seemed hesitant of touching the system, used only short, reduced gestures, and did not get deeply involved in the role-play. We also learned that privileged access of facilitators to system features affected the power play of the sessions. Privileged access (via mouse and keyboard from a separate laptop adjacent to the game board), invisible and unpredictable to participants, made them feel as guests, not allowed to 'own' system space and interact freely. When re-designing the *PitA-Board*, we added early playful phases for exploring and appropriating system behaviour and domain representation and we eliminated privileged access by providing means to control the simulation by manipulating objects on the game board. Combined with other improvements, the new version provided a much better experience and an atmosphere fostering group dynamics.

3 Exploring analogies

The analogies go deeper, as parallels for issues discussed in interaction design literature can be found in didactics and facilitation knowledge. To highlight these parallels I will follow a pattern of introducing an interaction design issue and then referring to analogous issues within the next paragraphs.

Shedroff (1999) describes interaction design (referring to web sites) as:

what people can do, what they participate in, what the site does to address their needs, interests, goals, abilities.

From pedagogy and adult education I learned that it is essential to focus on activities, subjective interests and needs of participants if organising workshops or facilitating group learning. Some interests and needs provide an entry point into the experience and transform over time. Some needs might be abstract (being inspired, self-renewal) and can be addressed in various ways, some are essential or urgent (doing your taxes, information on medication) and should be addressed directly. Both emotional and intellectual or utilitarian needs are important to consider (see e.g. Cohn 1975, Löhmer and Standhardt 1992, Meueler 1998, Portele 1992).

Interaction design is described metaphorically as the “design of spaces for human communication and interaction” (Winograd 1999, see also Crawford 2002). The analogy is with architects who create spaces which users appropriate and fill with their own life. These rooms are a medium in which a user lives, acts, and experiences. These spaces—abstract structures—at the same time predetermine feasible adaptation and movement paths.

A moderator or teacher defines structure as well, both in time and space. A simple yet familiar example is how the arrangement of benches in classrooms affects and predetermines possible interaction. A lecture-like classroom with benches makes group-work difficult, as circles are hard to establish, and moving about, changing places or doing gymnastics nearly impossible. The layout of a room creates expectations of what is expected or allowed behaviour. Therefore teachers and facilitators try to change room settings to be consistent with their teaching style or the kind of atmosphere and group processes they want to evolve. In a similar way digital systems provide a structure in which people can move about, while at the same time limiting movement.

Shedroff (2000) defines interaction design as the creation of experience:

Interaction design is the art of effectively creating valuable, meaningful, interesting, compelling and empowering information, interactions and experiences for other people.

Group didactics and facilitation methods can also be interpreted as design of spaces/structures for interaction and learning, where people (hopefully) make valuable and interesting experiences relating to their needs and interests. The question as to whether it is possible to ‘design experiences’, finds an analogy by acknowledgment that the structure provided by moderation can only facilitate certain experiences or processes but not automatically produce them. The same moderator, following an identical procedure at another time or with another group, can result in different processes. Moderation thus requires sensitivity, flexibility (‘rolling planning’) and consideration of context (in TCI: the ‘globe’) (Cohn 1975, Kuebel 2002).

A quote from Rijken (1999) captures the relation of experience and structure and by the words chosen supports the analogy with moderation and facilitation (emphasis by author):

The user creates an ‘experience’ while acting within an information environment. There is no single route or purpose. Instead there is a potentially endless set of paths or actions.... However, design decisions do ultimately determine the possible experiences. The space then works as a process facilitator. Experience is the dynamic end result of design in media as well as architecture.

Many researchers stress that interactivity is all about action and processes (Crawford 2002, Shedroff 2000, Svanaes 2000). We need to ask whether we want to provide passive, ‘canned’ experiences (like movies, animations, rollercoaster rides), or whether we allow for self-created active experiences. Creative and communicative activities are always experienced as engaging,

worthwhile and satisfying (Shedroff 2000). Therefore systems enabling creativity and communication often are a success.

Reform pedagogy and adult education methods have a long history of experimenting with active, creative, constructive and communicative methods, as these enliven learning and lead to deep learning experiences. Artifacts and technologies used need not be highly sophisticated. Often easily adaptable and rough but functional artifacts afford more engaging experience than high-tech tools. It is important what one can *do* with them, not their looks. The same holds for interaction design: Crawford (2002) pleads for the importance of talking *with* the user instead of talking *to* him/her and the importance of providing ‘verbs’ (action options) to the user.

Svanaes (2000) mentions the dramatic and rhythmic structure of interaction, which is experienced as a process over time. Thus interaction with systems can—just like a novel—be predictable, repetitive, improve in tempo and follow a dramatic structure or have rhythm. Didactics and facilitation stress designing session structures with equal attention to dramatic and rhythmic aspects (Kuebel 2002). We need to invite people into the process, allow for a group to form, introduce topics, create focus, provide variation of tempo, methods and issues, and to give an epilogue, which completes work, prepares for transfer and allows for a farewell.

4 The interrelation of process, structure and trust

Up to now discussion concerned how processes evolve in structures. Carefully designed structure fosters good processes. From theme-centered interaction I learned about the interrelation of process, structure and trust. Trust is a kind of mediating variable and also a result in this relationship.

There has to be a dynamic balance between structure and free-flowing, evolving

process. Too much structure fixes things, pre-structures development, leaving no space for (new) processes to evolve. Missing structure on the other hand makes people feel uncertain, insecure or confused, blocking process as well. Both conditions—too much structure or missing structure—lead to distrust, insecurity and even rebellion. Good structure gives group processes a direction (trajectory) by fostering certain kinds of interaction, encouraging specific topics and discouraging others, and by determining phases for reflection and relaxation (enabling conscious reaction). Thus structures create safe spaces for action and reduce complexity. Structure overused can close down spaces, but properly designed, it can open spaces. Structure must be trusted to be accepted. Trust is a result of good processes and in return fosters processes.

Every game has structure, and we all know that this does not hinder having fun. We only need to trust the structures usefulness and sense. Whenever a group facilitator imposes structure, for a productive processes it is necessary that participants trust him/her. Trust is something very sensitive. Thus structure should be made visible and its rationales explained. We also need to trust digital systems to some extent (or their makers) when interacting with them. If systems exert structure over us without us trusting in its sense, we usually do not like this. The question therefore is: How we can trust digital systems and their structure? And what does trust mean, when computer systems exert structure?

Structure needs to be changeable (during the process!), configurable, and open-ended. On the other hand structure is necessary: Who decides upon this? Whether it is possible or sensible to have trust into machines is highly questioned (e.g. Davenport et al. 2000), as trust refers to a belief in the others good will, good intentions, and competence. A machine has neither will nor intentions. Thus we cannot trust the machine

itself, but only the structure and its rationale. We would need to know what exactly the structure looks like and why. Apart from the laying open of structure and rationale, this requires that users have enough expertise to understand and evaluate the given structures. With computer systems, the designer of structure is not present any more and his/her ideas and assumptions have become static.

In the workshop on experience methods, for which the original version of this paper was written (Wakkary, Schiphorst and Budd 2004), ‘trust’ was repeatedly referred to during discussion. Its importance was obvious in the case of interactive installations requiring visitors to enter an unfamiliar experience of moving half blind-sighted in a sound environment. Artists found it useful to first give participants an experience of the basic mapping (action-effect), give them a chance to step back again and see the installation space from the outside and then go into it again. This can be read as a strategy of laying open basic structure in order to establish initial trust. Designing structures open to evolving processes and inviting exploration, yet setting preconditions and constraints for action while remaining acceptable and trustable seemed to be a challenge encountered by most workshop participants.

At first sight, trust seems antagonistic with ambiguity, which the workshop discussion discerned to be a central element for experience design. Systems that surprise and provoke us can provide an engaging use experience even though we do not necessarily understand them. Use experience can go beyond fulfilling initial user expectations. In some cases they should, because experiences that simply follow expectations are soon boring and predictable. Nevertheless systems offering surprise and ambiguity necessitate initial trust, as we can only experience them once we open up to the experience (otherwise they only passively happen to us) and we need to dare to explore the spaces offered.

5 Concluding remark

How far the analogies between designing group sessions and designing interactive systems can be drawn is not yet clear. They are obvious for certain types of systems, in particular for those with collaborative usage. The idea that systems do embody facilitation calls for a more thorough inclusion and consideration of knowledge about facilitation and group processes in system design. With the EDC evaluation, I have discovered the first examples of this phenomenon. For a more thorough discussion, more such examples should be collected and analysed. I do believe this to be a fruitful direction for further research, inspiring and guiding us, refining our sensitivity, and helping in designing better systems.

Some early thoughts on learning from TCI for CSCW have been presented in a position paper ‘Process and Structure—dialectics instead of dichotomies’ at the E-CSCW 2001 Workshop on ‘Structure and Process’.

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Eva Hornecker studied informatics and pedagogy, graduating with an interdisciplinary diploma. She finished her PhD on the cooperative use of tangible user interfaces at the University of Bremen in 2004. At the Vienna University of Technology she has been teaching on the Media Informatics degree program. Her research interests include tangible interfaces, tangible interaction, interaction design, CSCW, user-centred design, qualitative empirical methods and professional responsibility in computing practice.