Ethics and Usability Mentoring – an Exploratory Study

Åsa Cajander

Information Technology, Human-Computer Interaction, Uppsala University,
Lägerhyddsvägen 2, Box 337, SE-751 05
asa.cajander@it.uu.se

It is still difficult to achieve the ideas of user centred systems design in organisations, and we have seen that usability is given low priority in in-house systems development. In this context, usability mentoring has the potential of being a powerful method for achieving user-centred systems design. However, when applying a method such as usability mentoring one has to consider the ethical considerations that it might imply. This exploratory study on ethics and usability mentoring was carried out in an action research setting in a large government organisation in Sweden. Nine mentées were given the opportunity to discuss usability activities related to their work situation. The mentée were people with key positions within the organisation. The mentoring program has run for six months, and on averaged each mentée have had the possibility to meet the mentor every three weeks. Our findings indicate that the mentoring program made mentées work more actively with usability activities; hence the mentoring program had a visible effect on their actions. However, during the mentoring program several ethical issues occurred that are described and discussed in this paper. Examples of such ethical problems are personal conflicts between the mentees, a project leader asking for information from the mentoring sessions and mentees with hidden agendas that might influence the structure and strategic goals of the organisation. In the discussion part of the paper possible methods to handle such ethical problems are discussed. Finally, some suggestions of future work are explored.

<<Detta papper är inte alls klar.Allt saknas i resultat och diskussion, och jag ser fram emot en diskussion kring vad jag kan inkludera i pappret.

Introduction

"Usability and user centred systems design is like world peace. Everyone says that it is truly important, but no one really understands how they can contribute to it, and no one takes responsibility for it". This quote from an experienced project manager working with the introduction of user centred systems design (UCSD, [1] in a large government organisation captures in a colourful way the difficulties with achieving UCSD. The following story about the IT manager and a usability coach illustrates

how we have addressed this issue trough a method that I call "Usability Mentoring" and I will subsequently analyze different aspects of this story.

John is a 50-year-old very experienced IT manager working at top level in the government organisation. Previous to the mentoring program he had not contributed as much as he could have to the introduction on UCSD. However, he has been very dedicated to the mentoring program, where he takes every opportunity to discuss usability and usability issues in relation to his daily work and his responsibilities. During one of the fist mentoring sessions, the discussion concerned the waterfall model in relation to iterative design, as John saw no reason to work iteratively in their systems development projects. Among other things, he expressed that "iterative design is relevant in companies that work with new product development. But business development through IT requires a waterfall model." We had a vivid discussion, and John expressed a variety of reasons for not working iteratively. Some of these were things that I had not heard him talk about earlier, whereas some things had been discussed at a previous workshop were we both had participated. A few weeks later I was invited to another workshop on usability work in the organisation. John was also invited as a speaker, and he introduced the new software development model. As it turned out the new model was indeed iterative, and included new usability activities, and I wrote the following comment in my research diary: "He has really changed! He talks much more about usability today!! Is this due to mentoring???"

My previous research has focused on understanding the difficulty in integrating usability; user-centred systems design and occupational health issues in IT systems development, and how basic values and business values affect this integration [2]. This research indicates that the strong business value of automation, efficiency and customer satisfaction shape the development of new computer systems and ultimately the task and work practices. Moreover, previous research studies on manager's and their perspective on usability have shown that even though formal usability training has been provided, and despite the organisations overall focus on usability – managers in the organisation had a vague idea about what usability is and their responsibility for usability [3].

New methods are needed to impact basic values and the interpretation of what systems development is about, as well as what goals to strive for in an organisation. Perhaps mentoring could be one such method as research on mentoring have indeed discussed mentoring as a means of impacting values and perspectives, as is expressed in the following research article: "The combined effects of psychosocial and career functions are complex, and each individual is changed in some obvious and some subtle ways. /…/ parts of self are legitimized and brought to life through modelling and incorporation of new attitudes, values, and styles of operation." [4]. However, when implementing a method such as mentoring the ethical issues must be considered and addressed.

This short paper describes an exploratory study of a method for usability mentoring with the aim to understand the ethical issues related to usability mentoring. Some experiences of ethical issues from the usability mentoring are described In the discussion part of the paper possible methods to handle such ethical problems are discussed. Finally some suggestions of future work are discussed.

The Usability Mentoring Program

Formal mentoring programs can vary considerably (Ragins *et al.*, 2000) hence it is important to describe the usability mentoring program and how it differs from other mentoring programs. Unlike many mentoring programs that have personal competence and career as the focus – the usability mentoring program has the aim of introducing usability and UCSD through personal knowledge in the organisation. Hence this mentoring program aims at organisational change, and not merely personal knowledge.

Moreover, unlike many mentoring programs (Friday & Friday, 2002), this usability mentoring program is aligned with the long-term objectives and strategic positioning of the organisation as it aims at being the most user-centred authority in Sweden and usability is a part of the business goals of the authority.

Another major difference is that the mentor and some of the mentee have been from different backgrounds and areas of responsibility. For example, in this mentoring program the mentor is no expert of IT strategies and the strategic work in an authority – hence the mentor and the mentee create a new understanding of IT strategy work and usability based on their previous experiences and knowledge.

The usability mentoring program was initiated by the Human Resource Department in the large government organisation. This department also runs a usability project in the organisation that has run for two and a half years, and will continue another six months. The goal of the usability project is to increase knowledge about usability and a good computerized work environment. The project consists of several subprojects, e.g. Developing a specific measurement of usability [5], to develop a vision of future computerized work [6], and to revise and develop their systems development models.

Nine key stakeholders to systems development have had the possibility to discuss their daily work and responsibility in relation to the organisation's usability goal. The key stakeholders were appointed by the organisaion, and they had formal titles such as for example "It Strategy Manager", "Business Process Manager" and "Human resource Manager". Seven of the stakeholders also had the role of sub-project-managers in the usability project described above. All stakeholders had the same mentor, and they have had the possibility to meet with the mentor every three weeks during six months. Some of them chose to meet the mentor every three weeks, while others had meetings more seldom.

The project manager explained the reasons for launching the mentoring program in this way: "We *had already much increased the level of knowledge[1], and now there was a need for more continuous mentoring discussions. I thought the timing was good, and we needed a new approach."* The project manager presents her expectations of the mentoring program in the following way: "*The expectation I had was that the sub-project managers would work harder. That they would get some support in making this change*".

Formal mentoring programs can vary considerably [7] hence it is important to describe the usability mentoring program and how it differs from other mentoring programs. Unlike many mentoring programs that have personal competence and career as the focus – the usability mentoring program has the aim of introducing

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[1] Knowledge of usability and usability related activities

usability and UCSD through personal knowledge in the organisation. This mentoring program aims at organisational change, and not merely personal knowledge. Moreover, this mentoring program is aligned with the long-term objectives, and strategic positioning of the organisation as it aims at being the most user-centred authority in Sweden and usability is a part of the business goals of the authority. This alignment to long-term objectives is rare in formal mentoring programs generally [8]. Another major difference is that the mentor and a majority of the mentée have different backgrounds and areas of responsibility. For example, in this mentoring program the mentor is no expert of IT strategies and the strategic work in an authority – hence the mentor and the mentée create a new understanding of IT strategy work and usability based on their previous experiences and knowledge.

This mentoring program is based on a few basic values, where mutual respect support and comfort are three cornerstones as adult learning theorists content that learning is enhanced by these qualities (Knowles, 2005).

Moreover, some mentoring strategies have been used to enhance a good discussion, and to create a reflective learning. These strategies have active listening strategies, where the use of "interesting, could you explain further?", "tell me more" and "in what way?"

Aspects of Mentoring

Even though it seems that mentoring is a rather unexplored area in HCI research with few articles on mentoring [one example is 9], there is a large body of research on mentoring in other research areas such as for example education, management theory and organisational theory. Despite the lack of a definition [10], most agree that the term mentor generally indicated a person acting in a supportive relationship as teacher, coach, leader or role model of some kind. For this exploratory study, the following definition of usability mentoring is used: where a person with experience, knowledge etc advice and discuss usability related problems in a wider sense in relation to the mentées work and responsibilities.

The benefits of mentoring are extensively explored, and research has shown that individuals who are mentored "often advance more rapidly in organizations, earn higher salaries, are less likely to leave the organization, and express more favorable work attitudes" [11].

Mentoring research have focused on for example aspects of good mentoring [12-14], relationship effectiveness [7, 8, 11], ethical issues in mentoring as well as gender and mentoring[15]. For further reading on mentoring, see for example [16]

Ethics and Mentoring

<<Litteraturstudie om relevant etikforskning som kan ses som relevant annan forskning. Kanske söka på kunskap/undervisning/lärande och etik?

Action Research

This exploratory study is made with an action research approach. This approach is "unique in the way it associates research and practice, so research informs practice and practice informs research synergistically" [17]. Hence, action research has dual aims and is intended to produce both action (change) and research (understanding) as it encourages researchers to reflect on the effects of interventions and the implication of their theories. The dual aim of action research as both practical problem solving and testing theory provides a win-win scenario for both researchers and participants. Action research is a research approach with a cyclical process in contrast to traditional research which is often presented as proceeding from research question via method to results and discussion, as a linear process. Hence my research process is not linear, but more like an upward spiral where the empirical data and previous results drive the research as it evolves. In this context, the mentoring program is at the first iteration towards a formalised method of usability mentoring.

I position myself as an interpretive researcher, in the qualitative research tradition. The interpretive research tradition tries to attain a deeper understanding of reality, and research can be classified as interpretive if it is assumed that our knowledge of reality is gained through social constructions such a language, consciousness, shared meanings, documents, tools, and other artefacts [18]. This paper is written from the mentor's point of view, which can be seen as an insider's position in the exploration of the mentoring program. This gives me the advantages of a close relation to the mentée, and a possibility to see responses and reactions.

In the action research project, field studies, an interview with the project manager and as well as the mentoring sessions have been used to generate data for this study. During the study a research diary has been used complemented with notes on paper and mind-maps. The interview with the project manager was recorded with an audio recorder.

Analysis of data has been done through a mind map, where memory recall has been supported by the research diary as well as other written material. The recorded interview has been carefully listened through. All quotes in this paper are translated from Swedish and made more readable and names have been altered.

I position myself as an interpretive researcher, in the qualitative research tradition. The interpretive research tradition tries to attain a deeper understanding of reality, and research can be classified as interpretive if it is assumed that our knowledge of reality is gained through social constructions such a language, consciousness, shared meanings, documents, tools, and other artefacts (Klein & Myers, 1999).

Moreover, I try to adhere to the seven quality criteria and principles established by Klein and Myers for interpretive qualitative research (Klein & Myers, 1999)

A Social Constructivist View of Knowledge

<< Här kommer avsnittet Var är kunskap. Inte klart.

My perspective on knowledge is much inspired by (Schön, 1983), as the mentees are seen as reflective practitioners who gain a deeper understanding of usability through reflection-on-action, hence applying knowledge to practice while being coached by a professionals in the discipline. However, new knowledge is also created in the relationship between the mentor and the mentee as social constructivist view of learning.

Language and discourse plays an important role in learning, and in the mentoring conversation the mentee can express and elaborate the problems at hand. Sometimes this is enough to better understand the problem, and to see different alternative solutions and ways forward.

<<Kanske komplettera med tankar kring denna modell:

Mentoring ↕	Method
	Training
	Knowledge
	Action
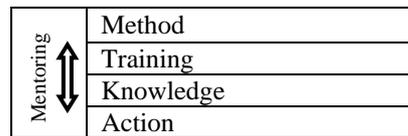
Results

Ethical Issues to Consider in Mentoring

<<Under den här rubriken har jag tänkt redogöra för olika typer av etiska problem som jag har stött på i mentorsprogrammet

Personal Conflicts Between Mentees

Private vs Official?

One of the most difficult parts is to decide what part of the mentoring sessions that is private, and what parts are official since many mentoring sessions tend to discuss conflicts and personal experiences when working with others. Some of these discussions have true relevance to the success of the usability project.

Project leader asking for information from the mentoring sessions and mentees with hidden agendas that might influence the structure and strategic goals of the organisation.

Discussion

<<Här finns det nu en mer generell diskussion kring mentorsprogrammet. Denna del ska kortas betydligt. Texten ska kompletteras med en diskussion kring olika tillvägagångssätt man kan använda sig av för att hantera de etiska problem som dyker upp i mentorsprogrammet.

Usability mentoring as a method is much dependant on the humans who participate in the program, the organisation and the problems the mentees face in their work situation. Given all the parameters of usability mentoring, it is impossible to predict ethical problems that might occur, and it is consequently hard to follow ethical guidelines. The mentor hence needs to acquire practical ethical skills, possible to use in the mentoring session.

<< Nedanstående kanske helt ska bort. Behåller dock så länge

One important, finding from this exploratory study is the power of impact the mentoring program has had on the mentées, and on their way of talking about usability and taking responsibility for usability issues in their professional role. Janet for example, has used the mentoring sessions to discuss her work with usability in business development and as a result invited usability experts to different workshops where they previously had not been invited. The discussions with John have made him consider and reconsider the way systems development and architecture of IT is organised, and he questions and discusses many aspect of usability work in relation to his work. One example is a discussion about usability aspects when automating case handling in the spirit of e-Government. John believes that from an automation point of view, the user is irrelevant and that the goal of automation in the organisation is contradictory to the goal of usable computer systems and a good work environment. Another example from John mentoring sessions is how new systems development methods are communicated and implemented in the IT projects. John's opinion from the start was that this was not his responsibility, as it is the responsibility of the systems developers to follow the written recommendations and to be updated on them. However, after a long discussion about the impact of systems development methods in practice (or lack of it) John decided to organise a full day sales activity to present and discuss the new user centred systems development model with people working in the IT projects. The mentoring sessions seem to have started a reflective process in him, and he makes sense of usability in relation to his own perspective and experiences – always willing to change that perspective if necessary. The reflecting process can be seen through the mail conversation we have had after philosophical mentoring sessions where he has mailed med wanting me to explain things further. It seems that John has been exceptionally good at listening, and his personal qualities seem well suited for a mentoring program.

As a mentor I have the impression that I have become a living reminder of usability issues, and that my mere presence as a mentor motivates the mentée to work with these issues. The mentor becomes a walking memory and reminder of usability. From this perspective the mere occurrence of the mentoring sessions is more important than their content and form. I would presume that they feel a need to prioritize usability in their daily work in order to report what they have done to me.

I believe that one powerful aspect of this mentoring program lies in the fact that it is a mentoring program where the mentor and the mentée work together in the usability project. As points out by [12]"discussions based on shared experiences are more powerful". There are always common experiences to discuss and relate to in the mentoring sessions.

Future Work and Conclusions

More research is necessary to be able to formulate a standardized usability mentoring process that can be customized to different organisational settings. Moreover, further research is needed to explore how the mentées made sense of the mentoring and their experience of the impact on their actions. Here, recent theory building in research about mentoring offers useful guidance considering what mentées learn in a mentoring relationship, and offers a taxonomy of learning outcomes [19]. These categories include affective learning, which consist of changes in attitudes and motivation. Another alternative way of exploring learning outcomes from mentoring would be to use Bloom's Taxonomy.

<<Någonting liknande detta. Men inte klart.

My conclusion from this exploratory study is that usability mentoring has the potential of being a powerful method in user-centred systems design. Our findings indicate that the mentoring program made mentées more aware of their responsibility for usability, and in what ways usability related activities are a part of their professional role. However, the mentor needs to consider the ethical dilemmas of mentoring and

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