The Case of the Strong Champion User

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Abstract
This paper presents the experiences from working in interdisciplinary projects involving a strong champion user. Brief descriptions of three projects are provided together with a discussion of what can be learned from the cases. It is concluded that the presence of a strong champion user who wants to take on the role as spokesperson for the whole user group can have both positive and negative effects depending on the project and its context.

Author Keywords
Interdisciplinary team; SOMWeb; user-centred design.

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction
In the late 1990:s the MedView project [3] was initiated as a result of spontaneous discussions between a researcher from the field of oral medicine and a researcher working at a computer science department. The main observation triggering the start of the project was the fact that all the data collected during clinical examinations could be a potential source of knowledge but due to the tools used at the time, mostly paper records, the data was in practice more or less useless for any knowledge extraction and analysis. As a result, a research program was formed with the overarching

aim to produce digital tools that would help clinicians to learn from their own, and their colleagues', collected data. The project was from the start interdisciplinary involving researchers and practitioners from medicine, computer science and interaction design. While the personnel has changed trough the years, a core group is still active although the current focus is more on maintaining and refining the software developed through the years than developing new tools.

This paper discusses some experiences gained trough working in an interdisciplinary context for more than 15 years with a focus on the case of the strong champion.

Team and Research Approach

The approach used in the MedView project can be described as being based on 2 pillars (i) A development approach grounded in user-centred design (UCD) and active involvement of stakeholders from the medical field (ii) An aim to realize ideas and concepts to the level where they can be tested and used for real in the actual contexts they are aimed for.

The multi-disciplinary team has consisted of a core group consisting of one specialist in oral medicine, 2 computer scientists, one focusing more on knowledge representation and reasoning and one (the author) more on interaction design, and an administrator responsible for maintenance and contacts with users[1]. Additionally, a number of other persons have been involved in different projects over the years. The original initiator from computer science left the project after a few years.

[1] Names are left out to achieve at least some level of anonymity

Main Artefacts Developed

The main artefacts developed within the project are MedView which is a user-controlled medical information system aimed at collecting and analysing medical data and SOMWeb [1] which is a support tool for knowledge sharing and communication in communities of practice. The MedView system has been used to collect data at more than 87 000 examinations and has been used for data collection in several research projects. SOMWeb has been used since 2006 and has to-date been used to discuss and analyze more than 350 cases submitted by the users in monthly tele-conference meetings. A spin-off, Gerioweb, targeting hospital dental care for older patients is used by the majority of public dental care in Sweden and has around 1500 registered users. Thus, the interdisciplinary design and research work discussed here has resulted in actual real software that has been used for an extended period of time.

The Case of the Strong Champion

The specialist in oral medicine, who is part of the core team, is a well-known and established researcher in his field. He has also been very active in promoting the use of IT for enhancing the quality of care and learning from patient data. Through his position he has had the possibility to directly influence the introduction and use of software developed in the MedView project in several ways. The effects of having this strong (SC) champion in the interdisciplinary team is described here and discussed in the next section.

The Core MedView System

The development process was not very user-centred: the IT part of the team suggested a design and it was presented to the SC who after some initial hesitation accepted the proposal. It was decided to move on with

the development and the champion could through his position make sure that the system was introduced and used routinely. The contents, or medical model, of the system was developed by a small group of dedicated clinicians.

The SOMWeb System
The development of the SOMWeb system was more in-line with UCD principles. The idea behind the system was based on a need stemming from a lack of IT-support for tele-conferences regularly held by a network of clinicians. The system was developed in two major iterations where the first introduced a simple web-based tool as a proof of concept and the second iteration developed the real system.
During the development reluctance could be noted from the SC regarding letting other domain experts and users into the team. The IT part of the team felt a need to investigate the needs for the system based on more than one user but could not gain access to them. Thus, the iterative design was in principle based on discussions within the core interdisciplinary team only. When the system was ready for use the SC could, in his role of chair for the network of clinicians using the system, ensure that it was adapted and used properly. After a while a study of the system in use was performed where several clinicians were involved which provided input for refining the system.

The Xero Case
Following SOMWeb the team received a grant to develop interactive decision support tools. The specific clinical area was not specified beforehand. After some consideration the SC suggested that the aim should be to support clinicians treating patients suffering from dry mouth problems, also known as Xerostomia.

Again, the SC did not want to involve other clinicians in the development. Compared to the previous projects the problem became more severe since it was not the champion's main field of expertise, the main designer was not willing to accept working with only one domain expert/user and there was a definite need to gather more information to be able to develop a useful tool. In the end, a couple of other experts were interviewed, but then it was more or less too late to rescue the project. Development halted even if the project did result in a couple of academic papers.

Discussion
Some factors affecting the projects were the characteristics of the projects, the persons involved and the perceived need of the expected results. In the 2 first projects having a strong champion representing the user group did overall work out well. The SC could in effect function as a representative user with a very good understanding of the needs of the real user base. UCD as such does not prescribe that a specific number of users must be involved in the process. Gulliksen et al [2] list a number of principles stating among other things "users must be representative". One could argue that the SC was representative and that the well-established collaboration within the core team was an important factor for success. Also, what the systems were supposed to do was rather clear from the beginning and did not require input from a wider range of stakeholders. Still, it is likely that valuable input was lost in the process due to the SC´s unwillingness to allow more users to take part in the process.

In the Xerostomia case, the SC could not really function as a representative for the users. This in combination with the unwillingness to let others take part had a

strong negative impact on the design process. When the SC did not wish to let others in, the main designer came to doubt both the SC and the material gathered as a basis for design. Here, an agreement of how the principles of UCD should be applied within the project could have been useful as suggested by [2]. This also illustrates the importance of listening and learning from each other in an interdisciplinary team: the SC was not really given a proper introduction to the principles of UCD and their roots in research, which made it harder for him to understand the designers' wishes. Gulliksen et al also advocate the presence of a strong usability champion. Due to the structure and history of the interdisciplinary team there was not really anyone who could fill this role and convince the SC to change his mind. This illustrates the need for balancing the power between the different members and disciplines in interdisciplinary research.

Another factor influencing results was the design and programming skills within the team. In the SOMWeb project, the main designer made several iterations and did in the end come up with one that everyone including the SC was pleased with. In the Xerostomia project, the SC did not appreciate the early designs, which led to an increased reluctance to involve others in testing. It was simply not attractive to the SC to try to involve others to spend time on giving feedback on a project he was not genuinely proud of. The SC had doubts about the design of MedView as well but trusted the design team and has many times since then stated that the details of design should be left to those who are trained in interaction design and computer science.

Finally, for a development process to succeed and lead to adaptation of the results there needs to be a real need and organizational support. In the MedView and SOMWeb projects the SC could by himself provide sufficient support and create a need for use to guarantee success. In the Xerostomia project this support was lacking and more user involvement would have been required to establish the project within the community.

Conclusion

This paper has presented and discussed the case of the strong champion and its effects on 3 interdisciplinary projects. In 2 of them development was successful and the presence of the strong champion did probably contribute. The 3rd project was less successful and one factor was that the strong champion came to be an obstacle rather than a factor for success. Arguably, a closer adherence to principles of user-centred design and the involvement of a larger number of users in the process could have improved the outcome of the less successful project

References

1. Göran Falkman, Marie Gustafsson, Mats Jontell, and Olof Torgersson. 2008. SOMWeb: A Semantic Web-Based System for Supporting Collaboration of Distributed Medical Communities of Practice. *J Med Internet Res* 10, 3:e25.

2. Jan Gulliksen, Bengt Göransson, Inger Boivie, Stefan Blomkvist, Jenny Persson and Åsa Cajander. 2003. Key principles for user-centred systems design. *Behav and Inform Technol* 22, 6:397-409.

3. Mats Jontell, Ulf Mattsson and Olof Torgersson. 2005. MedView: An instrument for clinical research and education in oral medicine. *Oral Surg Oral Med O*, 99, 1:55-63.