

Client Centred Design

a collaborative case study on the feasibility of e-learning

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Abstract

Exploring the feasibility of e-learning in collaboration with the client resulted in an outline of possibilities for e-learning strategies, focusing on different design scenarios and barriers. Working together with the client engaging in a mutual learning process was the main approach. It is a way for both partners to investigate the client's current activities and knowledge, competences and resources, and raise questions about what they need to consider when contemplating a large e-learning project. Focus was on critical questions to ask and further steps to explore and investigate in order to benefit from the opportunities within an online Continuing Medical Education (CME) programme. Point of departure for the work, and the core for the e-learning scenarios outlined was the understanding that decisions about an e-learning strategy must reflect and build on (but not be limited to) the client's competences and resources. Hence mutual reflections on the client's ability to provide for a possible solution are a pre-requisite.

Keywords

Client centred studies, mutual learning, e-learning and collaboration.

INTRODUCTION

In the spring 2002 the HCI research group at Copenhagen Business School was asked to explore possible e-learning strategies for the Lundbeck Institute, an independent educational subsidiary company of the Danish medical company H. Lundbeck A/S. During the following nine months the idea unfolded and a feasibility study which ran four more months was contracted. The study was named KA-CHE: Knowledge Acquisition in Continued Health Education / Computer-Human Environments and was a collaborative project between the HCI research group and Lundbeck Institute.

The CME programme under investigation aims at end-users, which are primarily general practitioners, but also specialists (psychiatrist and psychologists), from all over the world. The assumption of the HCI research group is that it is possible to identify and build on resources and competencies already existing in the client organisation, at the Lundbeck Institute. Our general argument is that if a preparation phase gives attention to the context and need of the client (i.e. not only end-users,) then it is possible to build on existing resources within the client organisation, leading to grounding of design decisions and a match between the e-learning environment designed and the capabilities of the client.

THE LITERATURE

Cato (2001) warns against the creation trap where clients too early in the process claim that: “*we know what we want; don't waste any more time exploring and understanding. Just get on and create it.*” (Cato 2001, p. 20). However, he does not involve the client actively, and involvement of users is restricted to user tests. Bødker and Sejer Iversen (2002) point out that methods are often taken “off the shelves” rather than chosen on the basis of pre-analysis and grounded decisions. The tendency is to jump directly from an identified problem to working on solutions. Reflections on and collaboration with clients and the building of a mutual knowledge base for grounding decisions seem rare in the HCI literature. It seems that publications on project management of multimedia- or web projects have more focus on collaboration with clients, early in the process, as well as establishment of clients' needs and the context. These methods deal with the design and management of processes, from the initial idea of a project to the final delivery, e.g. the MUST-method (Bødker, Kensing & Simonsen 2000), the Holistic Approach (Christensen & Harder Fischer 2004) and the Managing Multimedia and Web Design (England & Finney 2002). However, the HCI aspect is almost absent within this perspective.

Many larger publications, such as basic HCI textbooks, do not touch upon the initial phase where feasibility is studied, but consider the more traditional issues of involving the client and/or users in the actual design process (e.g. McCracken & Wolfe 2004, Preece et al. 2002, Dix et al. 2004). A general approach in these textbooks seems to stress the importance of HCI and User Centred Design in terms of bad (and very convincing) examples and economic arguments, followed by definition of core concepts and description of HCI methods. It is interesting that according to the textbooks, involvement of HCI-experts begins when the nature and purpose of the interactive system has been decided (McCracken & Wolfe 2004). Even methodological perspectives on e-learning embedding HCI activities seem to lack of pre-analysis and grounding of choice among methods (e.g. Vass et al. 2002, Urnes et al. 2002, Iacucci & Kuutti 2002).

Many e-learning projects lack a HCI perspective. They focus on e-learning production and address collaborative methods including client analysis and user involvement (Grützner, Weibelzahl & Waterson, 2004). A few case studies illustrate a close co-operation with a client throughout the development of an e-learning environment, e.g. Hewlett-Packard Virtual University, the Danish Rail and the Danish Army Officers School (Hansen & Borup 2001). However, these examples differ from the KA-CHE project, as their aim is in-service training and competence development of staff. Thus, the client/end-user relations are very different. Besides, when addressing end-users needs and context, the client's needs and context are inevitably addressed too. Whereas the Lundbeck Institute aim at external learners, such as specialists and general practitioners within the field of psychiatry.

In the following we describe the specific case study, which is a Client-HCI collaboration. We show how it enabled the provision of e-learning strategies and design decisions that are based on competences stemming from the HCI and e-learning fields as well as from the clients existing resources. We suggest that a Client centred approach may enhance the match between the users' and the client's individual needs and context.

MUTUAL LEARNING THROUGH COLLABORATIVE EXPLORATION

The initial task was quite clear from the client perspective – to begin working on an e-learning Continued Medical Education (CME) programme. However, we knew from earlier projects, that it was essential to investigate not only client's visions and needs, but also resources and competences, thus not falling into the *solution-creation trap*.

We thought that the major part of the collaborative resources in the pre-phase should be used on developing a common understanding of new e-learning theories, e-learning systems and on the existing learning activities and learning strategies at the Lundbeck Institute. E.g. which learning models are used? What do participants learn? What are the subject areas? However, through a gradual unveiling process, it turned out to be equally relevant to acquire a more general and not especially learning related knowledge about: How do people attend? How are they recruited? Who pays? How are the courses administered? Besides, it became essential to acquire knowledge about CME activities in general and international accreditation guides and regulations.

Ever since the first waterfall development model saw its light in 1970 (Preece et al. 2002, p.187), a critical movement towards more iterative processes have been prioritised. However, even an iterative version of the waterfall model and more end-user centred models as the star model and interaction design model, all focus on *go back to or return to previous activities*. Thus the risk is to confirm assumptions and validate knowledge uncritically, on the basis of the generated output. Our argument is that inherent in such a circular movement of *validating the knowledge known* is the possibility that no new issues of relevance are brought forward. The consequence is the risk of aiming at a design the client is not geared for. A focus on validation rather than exploration does not recognise that 1) there may already be ways of working in the organisation, which contains inherent possibilities; 2) validated knowledge may, when viewed from another perspective, give reasons for concern.

We do realise that iterations within a project, even within phases of a project is not unique. Our point here is that our work process with Client Centred Design in the feasibility study is different, because focus is on supporting the client's ability to provide for possible e-learning solutions by providing sufficient basis for the client's decision making about e-learning strategies and design of e-learning.

PROVIDING A SUFFICIENT BASIS FOR E-LEARNING DECISIONS

In all projects there is an element of working from explorative chaos to structure and mutual new understandings. Our aim was to create a basis for a mutual learning process and common understanding. In the beginning however, the client and the researchers/developers are far from each other in terms of use of concepts, pre-understanding and subject matter specialisations. It is vital to recognise that both researchers and the client possess implicit and explicit knowledge and pre-conceptions about the context and needs of the project (often both their own and end-users).

As such, KA-CHE was a typical project where the actual project is preceded by a process of clarification and negotiation of meaning. In this process the client's contextual knowledge, needs and visions meet with the

researchers' competences, scientific interests and experiences. But KA-CHE was special in that the Lundbeck Institute not only allowed for using a considerable amount of resources on a feasibility study, but also that the contact persons within the organisation succeeded in working in this very explorative manner and became collaborative partners. At times it was very frustrating because neither they, nor we, were able to see where we were heading, but also because they were not used to work under such floating and drifting conditions. Yet, they realised early on the need for this exploration of areas of interest and allowed themselves to engage in and be open to this process.

At the end of the KA-CHE pre-phase, it became clear that we had worked through a number of themes in an iterative manner. Those themes which turned out to vitally influence our design considerations: learning-management systems, international accreditation of CME, payment, the Lundbeck Institute competences etc. were neither the ones we started out with nor the ones we could have foreseen. They were the consequence of constantly questioning the knowledge we had during the process which allowed new themes to emerge and influenced our perspective and changed our view on the initial theme. These interrelations could not be identified beforehand but unfolded gradually.

CLOSING REMARKS

The process of collaborating with the client is essential. It is a process of dialogue and mutual learning (Nielsen et al 2003) and a possibility for both partners to investigate and learn about needs, market possibilities. But it is also especially a way to learn about client's current activities, resources and competencies, and it raises questions about what the client needs to consider when contemplating a large e-learning project. As such, the feasibility study was an explorative process aiming at providing sufficient basis for the client to make decisions about e-learning strategies and decisions about, and begin to organise design of e-learning. As a consequence, the study did not result in specific design solutions, it focused on critical questions to ask and further steps to explore and opportunities to investigate within online Continuing Medical Education. The study resulted in an outline of different e-learning strategies, focusing on design scenarios, possibilities and barriers.

Working in an explorative collaborative manner allowed critical issues to emerge, uncovering what we did not know. Such a process of inquiry made it possible to move beyond confirming knowledge already known, and identify what needs to be known. By explicitly uncovering the unknown, a forward movement is constituted that broadens and deepens our reference point, rather than validate the existing knowledge. This may not necessarily and automatically lead to better products. However, it is a basis because of its grounding in the client's needs, context and existing resources, as well as in a mutual understanding of the project.

However, there is a risk embedded in such an iterative explorative approach. The client may not feel comfortable with such an open process and may voice concern that there are no real measurable results. Despite close collaboration with the client, or perhaps even due to the close collaboration, the client may feel they invest significant resources without gaining any "real" results. This was a tangible concern in the KA-CHE project. Especially in the beginning of the process where the Lundbeck Institute expected the HCI research group to specify an e-learning strategy, conduct a few selected user studies and then the implementation could start. As the process unfolded, however, the project came up with more questions than answers. But exactly these questions made it possible to qualify different design suggestions for e-learning, which evolved around learning and dissemination scenarios building on the client's competences, existing resources and networks of communities. Hence decisions about an e-learning strategy, an e-learning system and a pedagogy must reflect and build on (but not be limited to) the client's competences and resources, and reflections on the client's ability to provide for a possible solution is a pre-requisite.

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