Usability Expert (UX) Evaluation in Practice

Bang K., M.A. Kanstrup, A. Kjems & J. Stage, Aalborg University, Denmark

An IFIP SELECT paper for IT-professionals based on the research paper:


1. Relevance to IT Professionals

Our paper describes an action research study of adoption of UX and UX evaluation methods in a software organisation. The host organization was the IT department of a Danish bank. The aim of adopting UX was to exceed a traditional approach to the design of banking applications.

The study demonstrates how the concept of UX and various UX methods were introduced in the IT organisation. The paper describes how we employed several adoption activities to introduce IT professionals in the organization to UX and UX evaluation methods.

Many IT organizations and IT professionals are motivated to adopt UX efforts in their development processes. Their aim is to enhance the user experience of the software products they are developing and make them more appealing. Yet they are missing guidance on strategies and activities for adopting UX efforts successfully.

Unfortunately, the research literature provides only limited support to UX adoption. We have found three papers [1, 5, 18] with qualitative studies of integration of UX in industry. However, they do not deal specifically with UX evaluation, they are based only on interviews with various actors, they provide only general and short descriptions of the cases, and two of them investigate companies where UX was already integrated.
In our action research study, we focussed on understanding, supporting and improving the practice of the development team, and we wanted to demonstrate how UX decisions could be prioritised in the software industry. The study deals with a specific project in the company where UX was introduced in early design activities to stimulate design of more interesting services in a banking system to manage loans with a smartphone. The study involved collaboration over several months between the researchers and a development team with members who had different roles. None of them had prior knowledge of UX.

Based on the study, we present our experience with adopting UX in an IT organisation with focus on the collaboration process, working with the UX definition, and the obstacles that occurred during the collaboration. This way, we demonstrate how UX methods can be introduced in an IT organisation and how UX decisions can be prioritised in the software industry.

Because of the focus and level of concrete detail, our study is relevant for IT professionals who are or will be involved in integrating UX and UX methods in a software development organization.

2. Utilising Our Experiences

The presentation of our action research study includes description of UX methods selected by means of the following criteria:

- They should be easy to use for practitioners with little to no prior UX experience
- The materials and equipment required should be minimal
- They should represent different approaches to evaluation of UX
- They should include both expert and user based evaluation
- They should facilitate collection of both quantitative and qualitative data

Based on a previous survey of 96 UX evaluation methods [21] and the criteria above, we chose the following four UX evaluation methods: SUXES [19], Product Reaction Cards [4], AttrakDiff [22] and UX Heuristic Inspection [17]. The description of our study illustrates how these methods can be used and what the experiences are.
The key members of the development team expressed a wish to learn about the methods, but did not have the time to conduct the evaluations. In addition, they expressed that they had not worked with UX evaluation methods before and were sceptical in regards to the outcome of these. Therefore, we decided to conduct them for the team, so we video recorded the whole procedure and provided an analysis of the results in a document form. After presenting the methods and results of the evaluations, the key members of the development team expressed enthusiasm in regards to the Attrakdiff user test. They found it a good evaluation tool that provided a clear overview of the UX dimensions measured in the evaluation, and they were motivated to use the Attrakdiff method themselves.

Our results show that specific UX materials and methods have been adopted in the development process of the IT department. This was accomplished by presenting these in a visual form (video recordings) and practical hands-on experience (workshops). The feedback from the key members of the development team on this was very positive, since they were able to see both the outcome of the evaluations methods as well as the procedure of applying the different methods. The videos gave a more realistic view on the methods as well as easy guidelines for conducting the evaluations.

A key team member also expressed that he planned to use the SUXES method in an evaluation of another system in the company, and two other key members wanted to integrate the method in their project.

In our description of the study, we illustrate the tool we used for planning our UX adoption effort. In table 1, we describe the plans for our adoption process. This table can be used to plan a similar effort in an IT organization.

We conducted a workshop (activity 5) to help the participants develop a comprehensive understanding of UX. A main product for other IT professionals is the description of this workshop as it can be used to plan a similar activity in the beginning of an adoption process. Three of our participants found it difficult to promote UX to employees in the company. They saw the workshop as a very positive way to promote UX, since people were able to work with the UX methods presented, and through this, they experienced the value of using the methods.

Even though the IT professionals and the company we collaborated with were positive towards both our adoption strategies and the evaluation
methods presented, we do not know whether they will be incorporated long
term. One of the team members expressed it this way: “We are creatures of
habits. Many quickly fall back into the old way of doing things... the old way
of thinking. One of the major challenges is to challenge the status quo.”; and
“(The method) introduced the colleagues to other ways of doing things. The
question is whether it can be kept alive or whether we fall back into old
habits.” However, we did demonstrate that we could move the culture of an
otherwise very static IT organization or as one of the participants expressed
it "It is also good to shake the heavy company culture up a bit and this has
been successful for you. Changes have been made.”

When we completed the action research study, it was uncertain whether the
company in the future would use the UX methods and tools provided. Yet
there were some signs. In the development team, small changes had already
been adopted, and the team was motivated towards continued work with UX
and UX evaluation, both in regards to this project and others. To investigate
this concern, activity 6 was held three weeks after the workshop. Here, it
was expressed that they had integrated aspects of the tools from the UX
workshop, and that the UX dimension cards from SUXES and Product
Reactions Cards were already integrated in their weekly workshops: “It (the
UX dimensions cards) is one of our bibles... we have decided to hang them on
our whiteboards.” So, at the conclusion of our study, there seemed to be a
lasting effect.

3. Update from the Host Organization

We were not able to investigate long-term adoption of UX in the host
organization due to the length of our action research study. However, since
the end of our study, we have managed to maintain contact with the host
organization. Therefore, we are able to provide an update in regards to the
use of UX in the company.

Since we conducted the study, the host organization has invested more in
supporting their employees in participating in UX courses and conferences. A
year after the study, the involved participants and other employees
participated in a UX conference. This included business analysts, developers,
designers, Scrum Masters, and managers.
The company also started hiring pure UX designers to jobs that included spreading out UX knowledge to the whole company and ensuring that UX was part of the development process. However, in the last year, the company has instead been giving the IT development teams more shared responsibility with regards to include UX in the products they develop. This has been necessary because the development teams are working in a more agile way. Therefore, there are not many UX designers in the company today, but UX work is conducted by analysts and developers in the agile development teams.

Some of the agile teams are now having biweekly study groups where topics such as UX design and trends are popular among front-end development teams. The study groups present and discuss books and articles about UX to each other. These efforts illustrate that the interest of UX is spreading throughout the entire development organization.

In the front-end teams, the term UX is often used when talking about the design and it seems that all team members are interested in giving their view on how to create good UX in the IT designs. This includes the developers, business analytics, and the designers. However, the UX focus is often not part of the very beginning of the design phase, but is included in the sketching phase. Moving it even earlier may be a task for future development of the IT organization.

The specific methods we presented in the adoption process are not in widespread use in the company. Yet many employees are exhibiting an interest in finding methods that are relevant for a development task at hand. The methods they find are then adapted to the company and the specific project. We see this method adaptation practice as a very important outcome of our adoption process, and much more important that the application of the individual methods we presented.