

Text excerpt from:

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### **4.3 Case 1: Law Library**

The first case describes two workshops that were conducted with members of the staff of an academic institution's Law library including members from the reference desk, leader group and digital services group. Conceptually, the workshops outlined were thematically structured around 'problem definition' and 'solution discovery'.

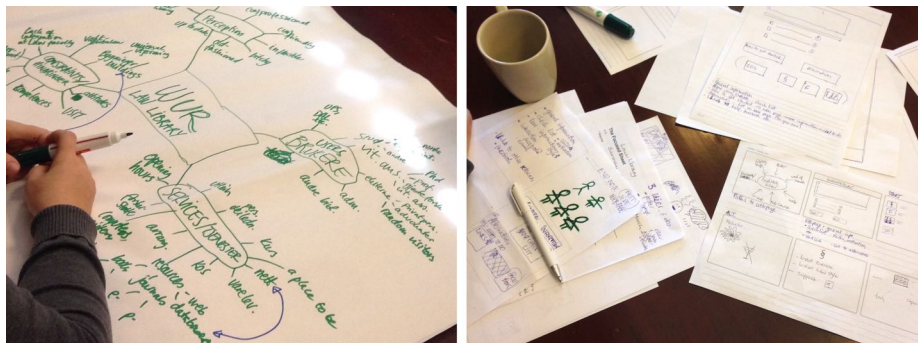
#### *Workshop 1: Problem Definition*

After an initial round of meetings with the library management to understand the roles of the participating communities in the workshop and to introduce the workshop structure to them, the first workshop was set up where ten staff members participated. The duration of the workshop was two hours and it took place at a conference room in the Law library where the furniture in the space was reconfigured to allow for group discussions and easy mobility. The goal was to have a collective brainstorming exercise for identifying potential problem areas from the participants' practice and experience. The participants were asked to form two groups of five each and were given a tool called 'the focused sheet' as a part of this action. This tool was an exploratory questionnaire that was divided into four parts that helped participants discuss potential users, their problems, context and organizational constraints respectively, as a way of formulating probable problem areas. Since the participants were used to working collaboratively with their group members, the structure of the group discussion was familiar to them. The tool however, created a reconfiguration of routine by being an additional physical material that the participants had to work with during their discussions and by adding a semi structured format to the discussion by posing questions around users and their context that would usually not be addressed in similar discussions. The groups addressed the tool differently, with one of the groups working through the sheet sequentially and discussing and completing each statement before moving on to the next and the other group choosing to have an open discussion after reading all the questions in the sheet. Finally, a collective discussion was conducted where both teams presented their responses and collectively deliberated over them with the author and library leaders helping assimilate their responses into a final collective focused sheet that outlined the problem area that would be addressed in the following workshop.

#### *Workshop 2: Solution Discovery*

The second workshop was conducted as a full day workshop in the same meeting room as the previous workshop at the Law library with fourteen members of the staff participating. Like in the previous workshop, the room was reconfigured and the participants were asked to form four groups, two of four and two of three members each. Each team was provided with an assortment of material like post-its, large and normal blank paper sheets and marker pens along with templates to aid the participants with different phases of the design process. The altered configuration of the space and the material available was designed to mirror the configuration and material used during the initial phases of the design process in design studios. The goal of the workshop was to introduce design thinking practices in the form of a process built around design methods using the problem area identified in the previous

workshop as the point of departure. The workshop was broken down into three phases: discovery, ideation and prototyping, with each phase lasting for about one hour and thirty minutes. The discovery phase consisted of a mind mapping exercise called ecosystem mapping where the participants tried to discuss and map the problem space visually by exploring four key areas as starting points - sub-classifications in the user category identified along with possible co-related users, current services offered related to the problem space, user's perceptions about the services offered and organizational constraints. The goal behind this action was to introduce a visual and collaborative method for group discussions and to establish a common agreed upon understanding of the problem space (Fig. 1 left).



**Fig. 1.** (left) The ecosystem map created by one of the groups. (right) The concept storyboard designed by one of the groups.

The ideation phase was split into two parts. The first part was an individual exercise where the participants were asked to work with the ecosystem map and identify as many concepts as possible for redesigning existing services or for new service ideas in the problem space. This was followed by a group exercise where the participants were asked to present concepts to each other and deliberate over them to identify the best concepts and/or create new concepts that built on individual ideas. This was done to allow participants to create concepts that built on their own individual experience and expertise in the framework of the identified ecosystem before discussing and deliberating over them as a group, allowing for more meaningful exchanges incorporating a multiplicity of perspectives. Participants were asked to put their ideas down on blank sheets of paper and initially, it was seen that most of them were verbally explaining their concepts on the sheets of paper provided and using a lot of time struggling with finalizing a proper framing for their concepts. Since this was becoming nearly identical to the participants' everyday practice, the ideation phase was paused and a small sketching exercise, led by the author, was conducted for about fifteen minutes. During this exercise, the participants were asked to create rapid sketches of common artifacts and spaces like smartphones, academic buildings, reception areas and stick figures and later asked to construct a narrative out of them. After the sketching exercise the ideation phase was resumed and the participants used a combination of sketches and snippets of text to illustrate their

concepts in a much more rapid fashion. Finally, in the prototyping phase, due to the constraints of time, the groups were asked to identify one of the final concepts and develop it into a storyboard (Fig. 1 right). The participants were asked to break down the concept into a series of direct and indirect interactions where the indirect interactions would lead up to the moment of direct interaction and subsequently lead out from this moment. Besides using the storyboarding templates provided, the technique of using individual visual elements to outline a narrative discussed in the sketching exercise was also used by the groups in this action. Finally, all the storyboards created were presented followed by a common discussion around overlaps between presented solutions and possible implementation strategies and risks for each solution. An open feedback session was conducted along with the circulation of a feedback form and the workshop was concluded with a note of thanks to the participants.

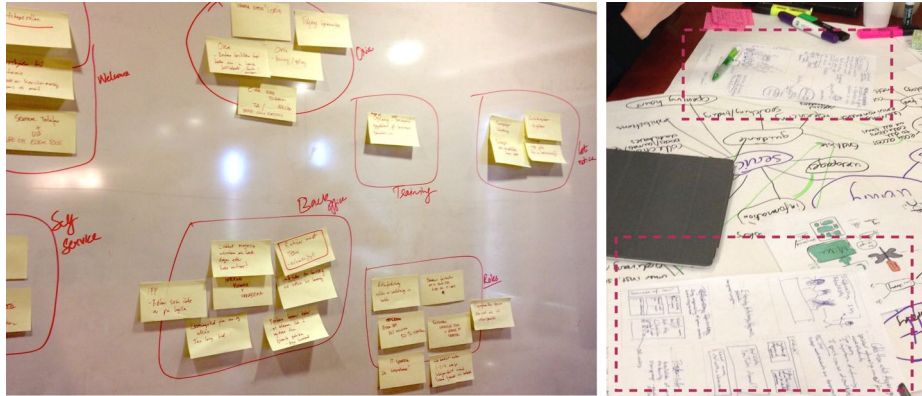
#### **4.4 Case 2: Humanities Library**

The second case describes two workshops that were conducted with members of the staff of an academic institution's Humanities library including members from the reference desk, leader group, backend services, support services and digital services group. Being a larger section of the library, the number of participants in the workshop was almost twice compared to the previous case. While the nature of the workshops followed a similar 'problem identification' and 'solution discovery' format, the actions incorporated were changed based on our observations and feedback received in the previous case. The problem identification method and template were altered and made less rigid while in the second workshop design ethnography, affinity mapping and rapid prototyping were incorporated as new actions. Further, multiple problem areas were identified, allowing each group to work with a problem area that was closely related to their practice.

##### *Workshop 1: Problem Identification*

Due to the diverse nature of the work practice of the participating communities and the larger number of participants in this case a different strategy for problem identification was adopted. The first workshop was setup as a part of one of the regularly scheduled meetings in the library where the structure of the upcoming workshop was introduced to the attending library staff and the author got a direct and face-to-face introduction to the roles and participating communities that the staff members were a part of. Twenty-two members of the library staff attended the workshop that was scheduled as a two-hour workshop. Rather than converging the problem space through discussion and deliberation around the focused sheet, an open brainstorm strategy was adopted. The participants in this meeting were asked to identify specific service, space or information related issues and every suggestion was noted on a post it and added to a wall without any filtration. The library management was not included in this part of the discussion to make the environment more anonymized and to encourage more open suggestions. Next, all the suggestions were collaboratively grouped by service, space or information type and larger clusters of problems were broken into sub-clusters by problem type (Fig. 2 left) leading to the

creation of seven problem areas. Using a sign up process, five groups were created, four of four members and one of six members. All the groups signed up for different problem areas. At the end of the workshop, all the participants were given the focused sheet and were asked to meet in their groups and discuss possible problems within their chosen problem areas that they could address in the next workshop.

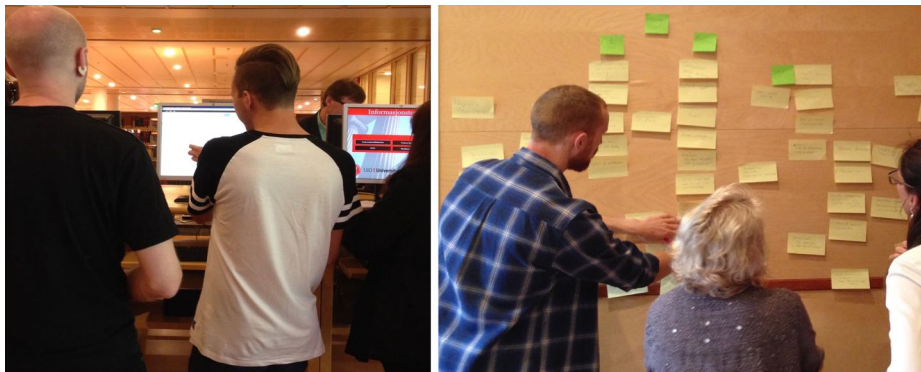


**Fig. 2.** (left) The final sub-clusters identified highlighting the problem areas. (right) The ideation sheet being used by participants in Case 1 (highlighted with red dotted lines).

### *Workshop 2: Solution Discovery*

The second workshop was conducted over two full days with twenty-two participants in a large conference room at the humanities library. The conference room was selected because of its large area, reconfigurable furniture and the accessibility of vertical surfaces like walls and windows in it. Five separate workspaces were created for the groups formed in the last workshop and each group was provided with materials like multicolored post-its, index cards, blank paper sheets in different sizes, multicolored marker pens, scissors, rulers and tape. While the goal of this workshop was the same as in the last case, i.e., introducing design thinking practices through the proto design practice approach using the problem areas identified in the previous workshop as a point of departure, a few important changes were made with respect to the materials, space and actions. While most of the materials were similar to the last case, index cards (A5 size and format) were specifically added to aid rapid ideation. Index cards, being smaller in size than sheets of paper (A4 size and format), allowed the participants to sketch a single concept per card and use as many cards as needed. This was due to the observation from the last case, where participants found the size of the sheets of paper too big (and the size of post-it notes too small) for single concepts (Fig. 2 right). Tools like scissors, rulers and tape were also introduced to allow the participants to reconfigure the materials. Vertical spaces were also made more accessible and the nature of the actions was also altered slightly from the last case to make greater use of these spaces. This was done to create improved shared spaces and encourage more active bodily engagement from

the participants. The change in actions used during the workshop was driven by two important observations. First, it was observed in the previous case that the discussions amongst the participants were largely framed around organizational and technological considerations with limited attention being paid to the user's perspective. Second, the storyboards discussed by the participants were still at an abstract level with regards to considerations like the content, format and channel. Hence, in this workshop, design ethnography and affinity mapping were introduced as an action to explicitly engage participants in user-centric perspectives in the workshop along with rapid prototyping to allow the participants to express their concepts in a much more tangible and concrete manner. Therefore, in this case, the workshop was broken down into four phases: discovery, synthesis, ideation and prototyping. As a part of the design ethnography action, the participants were introduced to different methods, including open interviews, guided tours, interface walkthroughs, cognitive mapping and directed storytelling. After the introductory session, each group was given thirty minutes to prepare for engaging with their informants where possible lines of enquiry and methods were decided. In the interest of time, informants had been pre-arranged for each group and an hour was allocated for this action.



**Fig. 3.** (left) Participants using the guided tour method with an informant. (right) Ecosystem maps being created on vertical surfaces.

Each group chose to work with more than one method, opting to complement open interviews with guided tours (Fig. 3 left) and cognitive maps for physical spaces and with directed storytelling and interface walkthroughs for digital services. This action was followed by a debrief coupled with the affinity mapping [50] and ecosystem mapping action. The intent behind this action was to identify common relationships and sub-groupings within the semi structured data in the map from the last action. The goal of this action was both reflective and analytical, juxtaposing user and organizational perspectives to clarify and create a common understanding of the problem space along with identifying possible areas of opportunity and intervention. As discussed earlier, in contrast to the previous case, the groups were asked to work with the vertical spaces in the room to create the ecosystem map (Fig. 3 right). Each participant used post-it notes to add their observations and thoughts to the map using

a similar template as the last case, starting with outlining user perspectives and followed by services offered and organizational strengths and constraints.



**Fig. 4.** (left) Segregating concepts into categories based on the complexity of implementation. (right) Paper prototype of a support website designed by one of the groups.

The session on day two consisted of the ideation and prototyping phases. The strategy for the ideation phase was similar to that of case 1, starting with a short exercise in rapid sketching followed by individual brainstorming and group discussions. As discussed earlier, the participants used index cards to represent their ideas and were subsequently also asked to collectively segregate ideas into three categories based on their complexity and the time frame needed to implement them: A- short term, B- intermediate term, C- long term (Fig. 3 left). Next, each group was asked to identify a concept for prototyping. Based on the concept selected, different strategies for prototyping were individually introduced to the groups (Fig. 3 right). Keeping the paper prototype as a central artifact, the groups then created a storyboard presenting the selected concept in use. Finally, each prototype and the accompanying storyboard was presented and discussed by all participants highlighting opportunities around impact on user experience, implementability and possible risks. Each group also tried to discuss their struggles and processes of concept selection during the final presentation. Finally, a feedback form was circulated and the workshop was concluded with a note of thanks to the participants.

## 5 Findings

In this section, the theoretical considerations related to learning and practices as a unit of design are used as an analytical lens to discuss findings related to the participants' interactions and feedback in the workshops. In addition, the proposed methodological guidelines introduced in section 3, related to the configuration of the space, materials present and actions introduced are also evaluated.