

Design opportunities for academic libraries

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ABSTRACT

Technology has made it possible for people to access digital material despite their location. This has disrupted the position of libraries as the main access point for reliable information through printed material. The aim of this project was to explore during a period of six weeks the challenges faced and opportunities gained by academic libraries in the current landscape. By conducting interviews with library staff and students we learned that the physical and digital libraries are often perceived as two different entities. We conducted a co-design workshop to extract a number of design ideas for making digital resources more present in the physical space. We intended to deliver concepts for a source of inspiration as well as guidelines for how to approach this type of challenge.

Keywords

Academic libraries, design intervention, co-design

1. INTRODUCTION

The role and shape of academic libraries has been evolving over the past three decades, as has been the case for numerous other social institutions. Digital technology has made it possible for people to access relevant knowledge without leaving their homes, which has disrupted the position of printed materials and libraries as the main access point for reliable information. In a broad sense, the intention of this project was to explore the challenges faced by academic libraries in the current landscape and extract design opportunities that can help them evolve in a direction in which they will continue to serve the community in valuable and unique ways.

We selected the library at Chalmers University of Technology as the context for our intervention. In a period of six weeks we carried out interviews with members of the staff and a co-design workshop with users and staff. From these activities, together with our own ideation methods, we extracted a number of design opportunities and concepts that could be used in the library. However, we believe that our conclusions are applicable for other academic libraries and could be valuable as a source of inspiration.

The purpose of this document is not to provide ready to implement solutions but to show a wide variety of possibilities, from simple, easy to realize ideas to more complex and challenging proposals, as well as guidelines for how to approach this type of challenges. It is our opinion that libraries will continue to play an important role as long as they keep evolving to the service of user's needs, as well as the needs of the information they provide.

2. BACKGROUND

Our exploration of the existing literature showed that concerns about the impact of digital technologies on the role of libraries in academia and society at large have been constant for at least the past 25 years. Besser [1] expressed concern about the dangers of shifting the focus of libraries from acquiring content to providing access to external sources. He argued, among other things, that the diversity of

the information available could be in danger if only the most popular material was to be pushed in the web.

Of course, some of the concerns that were expressed then seemed to have gone in an entirely opposite direction. Libraries have managed to evolve along with the increasing capabilities of the World Wide Web and information technology. However, the rapid development of these technologies puts libraries in a position in which they find new challenges as soon as they pass the last one.

Campbell [2] wrote about the need for academic libraries to define new missions since their traditional role as the top source for reliable knowledge has been losing relevance. The answer, he proposes, could be found in some services that have emerged in libraries in the past decade, for instance, providing learning spaces, teaching information literacy and digitizing material.

The concept of 'participatory library' is an approach that we believe worth exploring in the current landscape. People no longer expect to be passive consumers of information, a fact that is reflected in social media channels and online communities. As the name hints, the 'participatory library' proposes a library model that "allows users to take part in core functions of the library" [8]. Given the widespread popularity of user-generated content and active user participation, we think the academic library could also benefit from a model that allows students and university staff to relate to the knowledge they provide by adding their own views and experiences.

3. GOALS

One of our main goals was to create a connection between the digital and the physical libraries. We have noticed that the physical and the digital are very often perceived as two different entities. There is little manifestation of the digital content in the physical library, while regular users of the digital resources don't perceive them as part of the library since they can access them without leaving their home. We feel that it is important to merge these two entities. Especially now, when the amount of printed content in the library is decreasing, it is important to show the users that the library has an extensive amount of content available.

As part of this goal, we set ourselves to generate concepts that would make the digital collection more visible in the physical space. We also felt that it was important to create connections among the users, which is why we also focused on creating opportunities for interaction between the users of the library, in both spaces; for example, by making it possible for them to be aware of each other's presence.

Finally, the role of the library as a valuable place for social interaction was stated multiple times during our inquiries. For this reason, we explored possibilities of expanding the services, activities and spaces offered by the library outside from traditional offerings. In this way, the library can serve as a source for inspiration and curiosity for its users.

4. PROCESS

Being new to the library field we decided to use participatory design as a methodology for understanding the specific characteristics of the context and the unique perspectives of the stakeholders in this study [3]. We started out with online literature research about similar projects in the same context, to paint a better picture of what has been done and how. We also explored similar experiences in a different context to get inspired by new ideas and insights that could be applied into our field of study [7].

To gain a better understanding about how libraries operate, the challenges they face and how are rapidly emerging technologies influencing them, we planned to conduct interviews with different stakeholders of libraries.

We chose two libraries to start the dialog with: Chalmers University Library and Gothenburg University School of Design and Crafts Library. Our aim was to get at least one interview in each of the libraries and see if there was need and interest in developing the dialog further. From Chalmers University Library, we had the opportunity to talk to several people involved in organizing the physical space, working with the online catalogue, assisting library visitors, and working with the design of the new library website. We also carried out an interview with the person in charge of the library at the School of Design and Crafts from the University of Gothenburg. We conducted the interviews in the libraries, which made it possible to gain a better insight of the physical space.

The interviews were semi-structured to develop a fluid dialog [5] and to allow spontaneous remarks to arise [7], hoping to gain insights about topics that we had not thought of beforehand. The topics to be covered during the interviews included: physical library versus digital, people's behaviour and motivations in the library, the impact of digital technologies in the library and its staff, among others. Since we wanted to create a dialog, we opted for recording as a means of documentation. This allowed us to analyze the interviews afterwards without breaking the flow of the conversation to take notes. Finding of these interviews are discussed in the following sections.

The results from the interviews were used as a starting point for the following co-design workshop. We conducted a three hour co-design workshop with 6 participants. Our initial aim was to have around 8-10 stakeholders present, but the busy period at the end of the year made it difficult for some of them to attend. The three-hour time limit was set to keep participants from getting tired and loose interest.

In terms of resources, we used basic materials: a whiteboard, post-it notes, pens and markers. We used Legos and clay for inspiration, because the opportunity to 'play' with physical objects is important in creating a dialogue [4].

Following guideline formulated by Sanders et. al. [9] we created an outline for the workshop, but allowed flexibility in case interesting discussions arose. We planned for three main activities:

1. Each person should talk about a positive and a negative aspect of the library. The points from this activity were marked as issues to use as inspiration in the next activity.
2. Divide in groups for brainstorming. We joined in to the group work to make sure the discussion was flowing and to ensure that they were taking in consideration all the aspects that we wanted to tackle from the previous activity.

3. Discuss the ideas with the whole group.

Following the workshop, we had a brainstorming and development phase to work on the concepts that were interesting. The following section presents the ideas extracted from the workshop.

5. RESULTS

5.1 Opportunities

Using our finding from the interviews and the workshop, we compiled a list of opportunities that were either suggested by the people we talked to or by ourselves. Some of these ideas are very simple to implement while some would require heavy investment of time, money and manpower. Either way, we are presenting them as possibilities for the present and the future and expect to provide inspiration with them. It is worth mentioning that these are not finished ideas and we fully expect you to use your imagination and creativity to envision how they could be used in different scenarios.

4.1.1 Enhanced physical space

Elements added to the physical space to make it easier for people to experience digital content and take advantage of the facilities available.

- Interactive tables - A work table with a surface that allows people to consult digital material and move it around. They could also send the material to other people, annotate and save their progress and notes in their devices (phone / tablet).
- Shelves with digital white-boards - Surfaces that people could use to take notes and other functions.
- Digital News Room - Lounge room where people can use tablets to read news.

4.1.2 Library as a social space

One of the most important aspects of the physical library today is how it provides a space where people can meet, socialize and study together; these ideas attempt to support this aspect. The purpose is to make people inside the library visible to other visitors.

- Station where people can 'check in' when they arrive to the library (maybe using their library cards or student union card) and check if their friends or classmates are in the library.
- A system to ask for things from other visitors of the library. For example, someone could be looking for help studying chemistry; they can introduce the question in the system. A person that fills the criteria could see the message and offer to help. Alternatively, people could have profiles where they describe their particular abilities and other people could get in contact with them directly if they want their help.

4.1.3 Information discovery

The following ideas are aimed at encouraging people's discovery of new information. It is not about searching for specific titles but about exploring interesting content.

- Live recommendations – When a person picks a physical book from a shelf they get recommendations.
- Recommendation boards where people can pin content they consider helpful or interesting.
- Separate the physical space by areas of study make the digital content for those areas easily searchable through an application.
- Monthly topics in the library – The library could have a different subject every month and feature related resources, workshops and lectures.



Figure 1. Four visions for the library

- Physical installation that shows new and popular titles from the library catalogue and allows people to take the title directly and read it.

4.1.4 Make the digital present

The following ideas are aimed at making digital resources and users of the digital library visible in the physical space.

- Visualization of when and how many people visit the library and the flow of information in the library.
- Make online visitors present in the physical space by showing when they enter or leave the website.

4.1.5 Mobile apps

Even with the launch of a new website for general searches, specialized mobile apps could be created to make the use of the digital library more pleasurable.

- App to search, annotate and save full text e-books.
- App to manage subscriptions to specific e-journals.

4.1.6 Social media

Social media offers interesting possibilities to exchange ideas with users. These are the ideas related to encouraging user participation through social media.

- Offer students the possibility of producing podcasts hosted by the library about topics that are interesting to them.

5.2 Four visions for the library

From our exploration, we extracted four visions for the library, illustrated in **Figure 1**.

1. Digital motile walls: Digital motile walls can be used as digital shelves for browsing the digital catalogue, as digital whiteboards allowing collaborative drawing to be saved directly to user accounts or as interactive screens for conducting online meetings and watching video recordings. The walls can be freely rearranged to form semi-closed group workspaces with supporting innovative tools and promoting digital library by exhibiting new and interesting resources.

2. Extending the library: Interactive stands are distributed around the university campus to make the students aware of the possibilities and size of the digital library. It allows the library to present new and relevant material and makes it possible to browse the digital catalogue outside the library.

3. Physical location for the digital content: The physical space is divided into areas by subject or discipline. Within each area, users have options for easy access to the digital resources for that subject or discipline. For example, new and popular titles for each area are displayed in shelves, screens or search stations that can be either stationary stands or personal devices. The size of the 'rooms' changes according to the size of the collection, that way people can make a physical association with the digital resources.

4. Easy filtering: A tangible filtering board allows users to quickly visualize and control the results they need. With it, they can filter by content type, subject, year, etc. and pass their results to their devices. This addresses shortcomings in the systems used in the website and makes it easier for the users to grasp how much information they are dealing with.

6. DISCUSSION

Our initial mindset was 'saving the library'. Our perception of the physical library was limited to it being a quiet place for people to read and borrow books. We learned that libraries have a lot going on 'behind the scenes' that users don't get to see. This challenged the assumption that libraries were to become irrelevant because people no longer need to borrow books to access information.

Our interviews revealed that the Chalmers University library has been somewhat successful in adapting their mission and services to the continuing evolution of printed and digital media as well as the available technologies. We find, for example, that the acquisition of digital resources has been growing since the mid-90s and it currently takes more than 90% of the expenses in new resources [6]. Since the acquisition of printed resources has practically stopped in the past few years, we think it is of outmost importance to increase the visibility of the digital resources, given that the library building has not given signs of disappearing any time soon.

In addition, we found that the physical library has relevance beyond being a place where people go to borrow books, challenging the idea that it will be completely replaced by the digital library in the near future. It is a fact that the digital collection is taking dominance over the physical collection. However, almost everyone we talked to acknowledged that the most important role of the physical library is as a space to find culture and social interaction.

During the interview, we learned that it is crucial to explain our objectives with the project and the expected outcome of the interview from the beginning. We feel that we failed in that account in the first interviews, when we finally clarified the objective of our project in the middle of the conversation and got a more positive response from that moment on. In subsequent interviews we made a point of clarifying from the beginning and it resulted in more engaging experiences.

The planning and execution of the workshop, though challenging, was a great experience for us. Even though we had invested considerable effort in planning the workshop, in execution we realized that we had failed to communicate clearly the goal of the project and the workshop. In addition, we were not able to stay ahead of the participants to facilitate smooth transitions between the topics and the different phases of the workshop, which resulted moments of silence and indecisiveness.

Not being able to motivate participants to use the materials for physical immersion (Legos and clay) convinced us that the room setup and workflow could be improved in the

future workshops. We think that we could have mitigated these issues by acting out the workshop at the planning phase as well as having several iterations of workshops of this kind. We understand that the skills to facilitate a workshop are built with practice. Given that this was our first experience conducting a co-design workshop, we are confident that we could make improvements in the future. We believe the content of this report could be expanded by carrying out more workshops, incorporating new lessons.

7. CONCLUSIONS

Our main goal for this project had two layers. First, we wanted to explore the current state of the library and how design and technology could help it face the challenges posed by the changing technological advancements. Second, we wanted to use co-design to achieve this.

We feel confident saying that the goal set was achieved, while clarifying that there is room for expansion and further development. Even though the ideas extracted from the workshop could have been more numerous or exciting, we believe that opportunities delivered are interesting and can serve as inspiration for academic libraries. As for the workshops, additional instances could provide more interesting results, if the lessons learned during this project would be incorporated.

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