Participatory Design of Public Library E-Services

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ABSTRACT

Public libraries are in crisis-mode trying to figure out their future. One area they are struggling with is their role and relationship to the Internet – their e-services. This study engages public library staff and vendors in the redesign of online account management features as a way to explore participation from the perspective of the participants. Grounded in our experience, we explore what we mean by participation and identify barriers to achieving our ideal vision of participation. Mid-way through the project, we have begun to grapple with fundamental questions about participation and design and have identified some concerns we have, personally and organizationally, about involving library members in productive design activities, beyond their inclusion in generative and evaluative activities.

Author Keywords

Participation, Participatory Design, Participatory Action Research, Public Libraries, Co-Design

ACM Classification Keywords

H.1.2. Information Systems: Models and Principles: User/Machine Systems

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INTRODUCTION

Public libraries are in crisis-mode trying to figure out their future (Buschman, 2005). One area they are struggling with is their role and relationship to the Internet – their e-services (McClure and Jaeger, 2009; Sullivan, 2003). A big concern seems to be that information freely available online competes with their collections – online and offline. David Lankes has suggested changing focus from libraries to librarians, and from collections to connections. In the Atlas of New Librarianship, he proposes a new mission for librarians: to improve society through facilitating knowledge

creation in their communities (Lankes, 2011).

To fulfil this new mission and create a new relationship to the people in their communities, librarians will need skills and attitudes that help them facilitate participation. Bringing together concerns, ideas and methodologies from the fields of librarianship, education, and Participatory Design, this study explores participation from the perspective of the participants – defining our ideal participation process and identifying obstacles to achieving it, particularly barriers to involving library members in the design process.

Using Participatory Design (PD) and Participatory Action Research (PAR) as key methodologies, this study is being conducted by a PhD candidate working with staff, and vendors of the Toronto Public Library (TPL), the largest public library system in North America.

The research is being conducted on two levels. The first is the "Account Redesign Project" in which library staff and vendors have formed a cross-disciplinary team to redesign the user experience and underlying technology used by library members to manage their library account. Within this paper, we refer to these as the "design activities", which are based on Participatory Design.

The second level of enquiry, referred to as "Exploring Participation", is a series of activities reflecting on the participation of library staff, vendors and members in the Account Redesign Project as the basis for investigating issues of participation. Some of the library and vendor staff involved in the design activities have agreed to be co-researchers in this Participatory Action Research.

In this paper, we discuss the design activities and relevant reflections emerging from the research activities. However, more background on the research activities, including their relationship to Participatory Design, can be found in *Costantino et al., 2014.*

ACTIVITIES … SO FAR

In this section, we discuss the activities that have taken place so far.

Design Activities

For the Account Redesign Project the design team, comprised of library staff and vendors, are using many techniques pioneered and refined by PD researchers and practitioners. To date, the design team has gathered requirements, designed collaboratively, and conducted design research using the following techniques:

- Discovery workshops
- Status meetings
- Collaborative design workshops and co-location
- Wireframes, mock-ups and electronic prototypes
- Email, Basecamp, Trello and GitHub messages
- Blog posts with comments by library members
- Usability testing with library members

In addition, the design team is planning a closed beta test with library members, gathering structured feedback about the user interfaces as well as information to help prioritize future features.

Research Activities

Eight members of the design team have agreed to contribute to Exploring Participation, a series of research activities in which the co-researchers reflect on their participation in the Account Redesign Project. To date, we have had four key research activities:

- Discussion forum (online)
- Workshop (in-person)
- Focussed Conversation (in-person)
- Conference submissions (online)

Additional research activities are anticipated as follows:

- More Consensus Workshops, Focused Conversations, online discussions, and/or conference submissions amongst the co-researchers
- Survey of library members who contributed to the design through blog comments, usability or beta testing
- Interviews and/or survey of library staff and vendors who contributed to the design through any of the design activities.

RESULTS … SO FAR

There have been two main opportunities for reflection so far: a Workshop and a Focused Conversation. In this section we briefly discuss the approach and results. In the section that follows, we discuss some of the issues emerging from these two activities in more detail.

What are the key issues that make for an ideal participation process?

Using The Workshop Method by ICA (Stanfield, 2002), which has many similarities to Future Workshops (Kensing and Madsen, 1991; McPhail, et al., 1998), the co-researchers worked individually, in small groups and then as one larger group to answer the focus question "How do we envision an ideal participation process for the Account Redesign Project?". During the Workshop, we envisioned elements of the ideal participation process and then clustered the elements into the following categories:

- Accountability, within and beyond the team
- A base camp, physical and virtual
- Customer focus

- Respect within the team
- Practical vision
- Communal tools
- Well-defined governance
- Transparent communication
- Context awareness
- An iterative & flexible process

From this list, we identified 4 areas of the Account Redesign Project that we wanted to work on: Base Camp (i.e. having a project headquarters, co-location, etc.), One Team/One Dream (part of Practical Vision), Well-Defined Governance and Transparent Communication. We also talked about exploring ways to involve library members in a collaborative design role, in addition to a review role.

Who are the participants?

Two months later, as the design activities are were winding down, the PhD Candidate organized an in-person gathering of the co-researchers. Using the Focused Conversation method by ICA (Stanfield, 2000), the PhD Candidate led an enquiry that started with the following question: Who are the participants on the Account Redesign Project? This resulted in a diagram that includes 32 individuals and 3 TPL committees (Figure 1). TPL is a very large and consultative organization so projects often include input and reporting from many people within the organization, as is the case with the Account Redesign Project. The diagram of participants also included library members based on their form of input: blog commenters, test participants and web metrics.

Figure 1: Participant diagram from Focused Conversation

As we discussed the roles participants played on the Account Redesign Project, we clustered people, groups and committees loosely into user experience (UX) design, extended design, technical, IT, business, management and library members. We also recognized that people had varying degrees of participation and some had joined or left since the project began. This is an issue we would like to return to in future analysis.

ISSUES … SO FAR

Through our research activities to date, we have shared stories about our past experiences of participation; envisioned an ideal participation process; and grounded our reflections in our experience on the Account Redesign Project. Below we reveal some of the issues of participation we have churned up through these activities and are currently grappling with.

Design reviews vs. co-design

While everyone contributes to the design, there are four roles on the UX design team with specific responsibilities: user experience designer/ researcher (facilitation, sketches. wireframes and design research), graphic design (visual mock-ups), front-end coding (HTML in the form of an electronic prototype) and subject-matter expert (representing and consulting TPL stakeholders and members). The people on the extended design team are involved in a consultative and review capacity.

Early in the project, sketches were created in collaborative design sessions that included some of the UX design team and some of the extended team. The sketches were then taken away by individuals on the UX design team to refine separately. This resulted in multiple design reviews and, sometimes, competing designs, rather than co-design. As the design progressed, the UX design team was able to work with a single shared artifact (the electronic prototype), which allowed everyone involved to contribute to the design in an ongoing way. While this worked better, other factors have sometimes hampered the momentum of the design.

Trust, openness and communication

As with any participatory process, there are different levels of contribution, communication, continuity, and commitment amongst the participants. These factors have sometimes resulted in frustration amongst the team members. Another source of frustration has been the lack of a shared vision of the process and the goals. At times, these frustrations have impaired the trust, openness and communication amongst the team members.

Before and during the Workshop, the idea of a 'base camp' was suggested as a way to improve the cohesiveness of the design team. A base camp was set up at TPL so the core design team could be co-located in-person two days per week. Each two-day stint started with a status meeting, which included the core design team and the extended design team. This approach helped with progress on the design but inconsistent attendance by the core and extended team during co-location limited the effectiveness of this tactic in terms of improving trust, openness and communication within the team.

Accountability

In addition to their relationship to each other, the design team is keenly aware of their accountability to TPL stakeholders and library members. TPL stakeholders are kept up-to-date through reports to various committees on an on-going basis. The team also reports periodically to the public and staff via the Web Team Blog. We continue to consider ways to make the design process and outcomes more transparent.

Power relations

The relative power of the many players in this project is mind-boggling. The design team consists of the manager and several other members of the TPL E-Services team, as well as several staff members from each of two vendor organizations, contracted separately. As mentioned previously, there are many other TPL stakeholders with varying degrees of power within TPL and within this project. Given the economic relation between TPL and the vendors, it would seem obvious that final decision-making regarding design lies with TPL, generally the manager of E-Services who represents the interests of the wider TPL stakeholder group – and this is true. However, the team has been encouraged to speak freely and has been able to affect decision-making through their design choices and their ability to support those choices.

Participation by library members

In the years leading up to the Account Redesign project, the TPL E-Services team collected input from library members in the form of emails, blog comments and discussions, often in the context of usability testing incremental new features. Because of this input, the E-Services team felt that the scope of the redesign was well known in terms of user needs as well as organizational constraints. Therefore, we did not include any activities with library members that were intended to generate ideas or establish priorities for the Account Redesign project. In our reflections on the project, specifically during the Focused Conversation, we referred to these as generative activities, making a distinction from evaluative activities such as design reviews. However we made a further distinction between generative activities and what we've called "productive activities", where the participants are engaged in the detailed work of interaction and interface design. While much user-centred and participatory design involves end-users in generative and evaluative design activities, we were especially interested in ways to collaboratively design interfaces.

However, user involvement to date has been mostly evaluative, including several rounds of usability testing and comments on design on TPL's web team blog. It has been challenging for the design team to envision how users would be involved in productive design activities, i.e. contributing directly to the wireframes, visual designs and emerging HTML prototype.

In the Focused Conversation, we discussed what some of the personal and organizational barriers are to including library members in design. Several people expressed regret that we had not, to this point, included representative users on the design team.

One person mentioned that at the beginning of the project, she had envisioned having one or two library members join the UX design team. We talked briefly about how this might work. Like others on the UX design team, would the library members contribute to collaborative design sessions weekly, be co-located with the design team two days per week, and provide feedback on our various online channels between design sessions? Would the same library members attend consistently or would different members attend the various sessions? These speculative questions have not yet been answered.

Another co-researcher was very frank about her concerns. First and foremost, she feels guilty that the Phase 1 rollout of the Account Redesign Project won't deliver the features most desired by users – and is already bracing for the backlash.

She also does not want to put users in the position of solving user interface problems that arise because of TPL policy. As one of the subject matter experts, she often provides a reality check for the design team about what can be accomplished within the constraints of the organization, such as policy decisions, technical limitations and available resources. Being cast as an apologist for TPL with library members is fraught with discomfort and risk.

She also recalled the not-so-good-old-days of "design-by-committee" when her TPL colleagues (none of whom are employed as designers) would provide detailed input into the user experience design. This resulted in designs that were influenced by group dynamics and were ultimately not successful.

Finally, she mentioned that if the design-development-implementation system at TPL were more agile and flexible, making it easy to test and modify design choices, involving end users in design would feel more comfortable. However, as it is now, TPL has to live with its design choices for a long period of time, even if they have evidence that they are flawed.

Since she is the person with the longest history with TPL, most often face-to-face with library members and because her concerns are rooted in her experience, her concerns went unchallenged by the other participants in the Focused Conversation. However, this discussion will be continued in upcoming research activities.

NEXT STEPS
The design activities are winding down on the Account Redesign Project. There will be one or two more rounds of usability testing with end users before a beta test tentatively scheduled for Fall 2014.

As mentioned under Research Activities, we are planning additional reflections amongst the co-researchers. Some of the questions we haven't yet explored include the group's perspective on involving library members in an agile development process when designing a responsive digital product. Creating a website that renders well on multiple device sizes, such as desktop, tablet and mobile, is a particular design challenge calling for some adjustments to our design activities.

In addition, we are planning to survey library members who were involved in the evaluative design activities, such as blog commenting, usability and beta testing, to gauge their satisfaction with the current process; to gather their ideas for improving the process; and to test our ideas for future processes.

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