
doGooder: Fostering volunteer communities to serve the homeless

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Abstract

We developed an online system, doGooder, to foster volunteer social networks. Through an extensive user-centered design process, including interviews and a literature review, we learned that people experiencing homelessness face a wide range of issues. Most organizations helping the homeless depend heavily on volunteers to enhance their service capacity. One agency we studied was able to extend their budget by 30% as a result of volunteer labor. Research shows that social relationships play a key role in galvanizing potential volunteers and motivating existing ones. doGooder connects volunteers with opportunities and service organizations, and builds a community of volunteers to encourage each other. Preliminary usability testing indicates that doGooder will successfully help organizations to recruit, retain, and organize volunteers to meet the diverse needs of various populations facing homelessness.

Keywords

Design, community, social reinforcement, social networks, homelessness, volunteerism.

ACM Classification Keywords

H5.2. Information interfaces and presentation (e.g., HCI): Miscellaneous.

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Figure 1. Interpretation session

Introduction

Approximately 3.5 million people in the United States are likely to go without a home at some point in a given year. An analysis of homeless shelter occupancy in 2007 showed a dramatic increase in the number of people experiencing homelessness in the United States [1]. Our investigation revealed that volunteers have the ability to positively impact the lives of the homeless by extending the capacity of service organizations. However, we found that these organizations face many difficulties in organizing and retaining volunteers. Over a span of four months, our team conducted a user-centered design process to develop a volunteer support system that would make a significant difference in the lives of both the chronically and temporarily homeless.

Information Gathering

We began the design process by gathering information about homelessness. From our preliminary literature review, we learned that the homeless encompass a wide variety of demographics, so we turned to more specific literature on different types of people **experiencing homelessness** and their needs, including teen runaways, the homeless in developing countries, the rural homeless, and the chronically homeless.

Our team conducted a round of five exploratory interviews with both homeless people and agencies that serve them. We met with several homeless individuals at a free breakfast event, asking about their needs in a casual setting. Additional interviews included a volunteer coordinator and a technology manager for a local homeless shelter and staff from the Salvation Army and United Way.

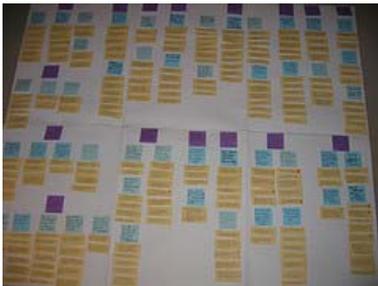


Figure 2. Our affinity diagram

Interpretation Sessions

During our interpretation sessions (Figure 1), we analyzed the information from our interviews and made affinity notes. We then created an affinity diagram (Figure 2) to identify key issues facing the homeless and explore solutions that address these issues.

Our analysis supported our initial finding that the problems facing the homeless are highly contextualized. The chronically homeless often deal with mental and substance abuse problems, while temporarily homeless families face issues ranging from unemployment to domestic abuse. While diverse service organizations focus on different populations or goals, most face the same scarcity of financial and personnel resources. It soon became clear that a system designed to increase the productivity of these organizations would more effectively address the varied needs of the homeless than a system targeting a specific homeless population.

A Need for Volunteers

Our team found that most agencies that help the homeless in the United States are funded largely through donations and/or government support, and this often leaves them with constrained budgets. As a result, these organizations are unable to meet all of their needs with paid staff; instead, they rely heavily on volunteers to extend their capabilities. A volunteer coordinator at a large homeless shelter told us that volunteers allow them to stretch their budget by 30%.

Once we decided to focus on volunteerism in organizations serving the homeless, our team conducted a second round of interviews to deepen our understanding of this area. We met with past volunteer



Figure 3. Ofelia, a volunteer coordinator persona



Figure 4. Early low-fidelity prototype sketch

coordinators from both Habitat for Humanity and a homeless shelter in Chicago. We interviewed people who had volunteered in a variety of contexts. We also evaluated the site VolunteerMatch.org, a volunteer opportunity directory, and conducted a phone interview with one of their representatives.

Research shows that volunteers need to feel challenged, engaged, and valued to continue volunteering for an organization, and difficulties coordinating and connecting with volunteers can lead to high volunteer turnover [2]. Social networks inspire would-be volunteers by identifying peer-vetted opportunities [3]. They also establish social norms and provide avenues for recognition [4], keys to volunteer retention. A recent study shows that many organizations are turning to the Internet to increase the scope of their recruiting efforts and better communicate with current volunteers [5]. Our team found that existing sites, such as VolunteerMatch.org, follow the model of a simple bulletin board. Such a system limits communication and does little to foster a community around volunteers and service organizations.

Fostering Volunteer Communities

To address these issues, our team prototyped a system that would use social networking to connect volunteers with opportunities and with each other. We gave volunteers an opportunity to create testimonials about their experiences with organizations and volunteer opportunities, implicitly recommending them to other volunteers and creating higher levels of trust and, in turn, higher levels of volunteer involvement.

We began our design process by creating seven personas (Figure 3), including both volunteers and

volunteer coordinators of different ages and backgrounds. We developed scenarios for each persona to identify their needs. We then sketched a low-fidelity prototype to create tools to meet these needs (Figure 4). Finally, we synthesized our ideas into a high-fidelity prototype with a working web-based interface using Adobe Flex. To fit our theme, we named our system doGooder.

Our Project: doGooder

doGooder is an online social networking application for volunteers and service organization staff. doGooder supports interactions between three major entities:

- Users, who can both volunteer for and organize opportunities.
- Opportunities, which can be either scheduled for a specific time and place, or be ongoing.
- Organizations, which can be associated with opportunities and with users, particularly staff members such as volunteer coordinators.

Users drive the system. They can sign up for opportunities, create opportunities, and browse opportunities by geographic area, organization, or through other users in the system. Users can create a profile that describes their personal characteristics, and write testimonials about organizations and opportunities to encourage others to participate. To further illustrate the features of doGooder, we will use a scenario from the persona of Grace, a retiree interested in volunteering.

Grace, a retired secretary, begins by logging into doGooder on her home computer. She starts at her dashboard page (Figure 5), which gives her an

overview of what is going on in her online volunteering community. Grace can see the opportunities she has signed up for, along with her friends' recent activity. Scanning the page, Grace sees that her friend Shirley signed up for an opportunity at a local soup kitchen. She clicks the link to Shirley's profile, and notices that Shirley left a positive testimonial about her experience at the kitchen.

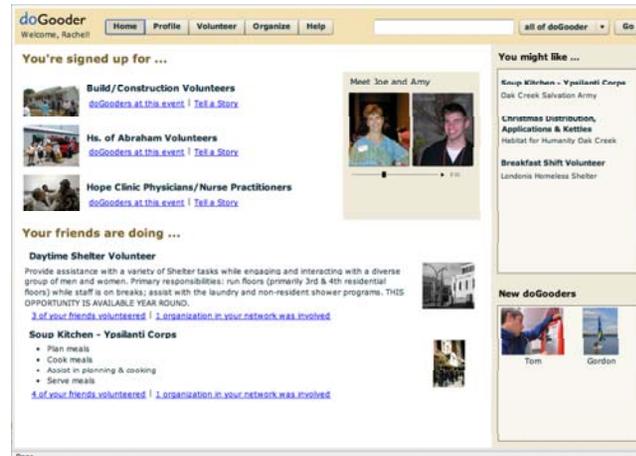


Figure 5. The dashboard for our hi-fidelity prototype

Browsing her opportunities, Grace notices a gift-wrapping opportunity for children at a local family homeless shelter that she volunteered for the previous weekend. Grace clicks on the opportunity listing and glances at a series of pictures that another volunteer posted. She smiles at a picture of Daniel, a young toddler who laughed as she wrapped presents. She then notices the link to post a testimonial about her experience, and decides to share a few lines about the joy Daniel brought her.

As she finishes writing her testimonial, Grace notices a list called "Opportunities you might like" in the right sidebar. She sees that the soup kitchen her friend Shirley had volunteered at is looking for help on Wednesday morning. Recalling that Shirley enjoyed her experience, Grace clicks the link for more information. She notices that a staff member from her church is listed as an organizer for the kitchen. Grace sees all the opportunities at the kitchen, including a breakfast shift on Tuesday that would better fit her schedule. After reading a short description of the opportunity, including an interactive map with directions to the kitchen, Grace clicks the link to sign up. A simple confirmation screen appears with the details of the event, which she accepts. Grace is returned to her dashboard, where she notices a reminder for the opportunity she just signed up for.

Grace also notices a message waiting for her. Ofelia, the volunteer coordinator at the homeless shelter where she had volunteered previously, sent her a thank you along with a link to an ongoing opportunity to supervise young children on Thursdays at the shelter. With Thursday evenings free, Grace is happy to sign up to play with more children like Daniel on a regular basis.

By using doGooder, Grace is carefully matched with opportunities that fit her needs. She can see the activities of her friends and testimonials from other users, which helps her connect with new opportunities. Her dashboard helps her keep organized and connected with her friends and opportunities. Grace can also share her past volunteering experiences, giving her a feeling of responsibility and accomplishment. Members of service agencies are easily able to connect with Grace.

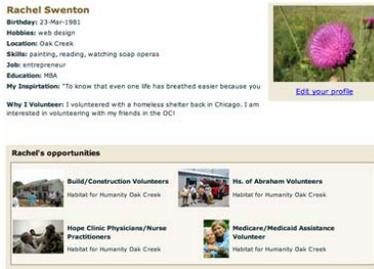


Figure 6. Updated page with opportunities listed in the main content

Sustaining doGooder

doGooder is intended to be a low-cost system that can be hosted on traditional web servers and scaled as needed. Only a small staff will be necessary to perform technical maintenance and handle user issues. We anticipate that doGooder will grow over time, and will likely need additional hardware and human resources. To fund this, doGooder will display unobtrusive ads from socially conscious businesses, such as fair-trade or eco-friendly vendors. This will benefit both parties, as businesses can target a socially conscious demographic through a website whose mission reflects positively on their brand or organization.

As a social networking tool, it is important that doGooder quickly reach critical mass. We intend to accomplish this in three ways. On the technical side, we will use tools like the Facebook API and Google's OpenSocial to transition members of existing social networks into doGooder. We will also integrate with current online volunteer systems like VolunteerMatch.org to benefit from an established user base. Finally, we will reach out to umbrella organizations such as United Way, who can integrate doGooder into their national network of service organizations that aid the homeless and others in need.

Usability Testing

Our group conducted preliminary usability testing with seven participants and found their feedback valuable in refining the system to encompass the broadest spectrum of users. Test participants were invited to a room with a laptop displaying the doGooder prototype. A member of our team was present to moderate the session, answer questions, and take notes as the participant interacted with the system. The participant

was encouraged to speak aloud their thoughts and feelings as they worked through three prescribed tasks: explore available opportunities, connect with another volunteer, and post a new opportunity.

As users completed the tasks, their facial expressions and mouse movements were captured using screen-recording software. After each task, participants were asked a series of questions based on Jakob Nielsen's design heuristics [6]. Once all of the tests were completed, we created a user test matrix to compare and evaluate the data from the questionnaires. We were then able to prioritize improvements to our prototype by using this matrix and the data from our screen recordings.

Testing Results

Overall, users reacted with excitement at the prospect of using the system in their own lives. They also identified areas where we could improve our site architecture and layout.

We found that users often overlooked information about relevant opportunities displayed in the right-hand sidebar. Since volunteer opportunities are an integral part of doGooder, we chose to move information about opportunities into the main content section of the page so that they became a more natural part of users' task flow (Figure 6). Users also struggled with our preliminary form to post opportunities. It wasn't intuitive enough and provided too little feedback. To fix this problem, we prototyped a wizard-like interface that would guide users through the process. Finally, we addressed several issues related to the vocabulary of labels and widgets in our system.

Conclusion

The diverse causes and issues related to homelessness require substantial and individualized responses from a wide variety of service organizations, many of which struggle with limited resources. By increasing human resources available to service organizations through a system that helps recruit and retain volunteers, we can help these organizations better address the myriad issues facing the homeless.

To this end, we have developed an online social networking application called doGooder, which connects users with volunteer opportunities and develops social ties among volunteers and service organizations. We began the project by conducting interviews and researching homelessness. We analyzed our data, and built personas and scenarios to help conceptualize our system. We then built a prototype of doGooder, which we further refined after conducting usability testing.

doGooder has several advantages over existing systems. It allows volunteers and organizers to communicate more closely and consistently. It encourages volunteers to recruit new users from their own social circles, building the system in an organic way. Users can leave testimonials, motivating others to volunteer.

Through our design and testing, we have worked to make the doGooder interface intuitive. Users can quickly and easily connect with other volunteers in their network. The system makes recommendations for opportunities that might be of interest to a user. Any user can easily create an opportunity and alert other users that may be interested in signing up.

Our interviews and research have shown that social networks are key to motivating people to volunteer their time and resources [3]. By fostering a community around volunteer opportunities, doGooder not only connects volunteers with opportunities, but keeps them actively engaged with other volunteers and organizers. This, in turn, relieves stress on many organizations' limited resources, allowing them to reach out to the homeless and meet their needs, whatever they may be.

Acknowledgements

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