Lo-to-Mid Fidelity Prototype Testing and Refinement

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Problem Overview

Adolescence and growing up is hard enough for teenagers, but sexual identity crises can push troubled teens to the edge, and in severe cases, suicide. We are proposing an application called Alliance, designed to bridge the gap between troubled teens on a struggling search for help with volunteers and trained professionals. Suicide hot-lines exist, but have proven to mostly help those who actively searching for or are open to receiving help. The issue lies in those who are closer to giving up than looking for a helping hand. Our application is aimed to build a secure, welcoming, and comfortable environment that LGBTQ teenagers in danger of committing suicide can instantly turn to with no fears or inhibitions of being judged or shameful. Our interface, comprised of a mobile and personal computer interfaces, is pointed at a creating a smooth connection between volunteers, or Allis, and teens seeking help instantly. Alliance allows those who are just beginning to struggle with depression caused by, to easily reach out and express their thoughts and feelings with trained volunteers, curtailing the problem before it becomes too severe. The application is simple and welcoming, allowing a user to unload their inner turmoils and get the help and support they need.
Lo-to-Mid Prototype Description

Our prototype involves a web interface as well as a modification of that interface for mobile devices. The web interface includes many functionalities, depending on whether it is the Alli’s side or the user’s side. The user interface is quite simple, a basic chat box interface, not very cluttered and clean. The purpose is to not scare the user away with bright colors or overly happy images. The Allis side, however, is a bit more complicated.

The Alli has many tools at their fingertips. There is a dock of resources, guidelines, and information on the left side of the web interface. When in a chat, they first can see if the user they are talking to is registered. The user’s IP address is displayed if they are not a registered user, otherwise their username is displayed. Directly underneath, there is a expandable menu of logged chats for an Allis reference. A “Danger Rating” graphic appears in the dock on the left side of the screen. This “Danger Rating” is calculated from the usage of flagged keywords used, as well as the frequency the user uses Alliance as well as their durations for that specific user or IP address. Continuing down the dock, there is a sign-up invitation button that the Alli can select if they would like to present the user with a registration link, automatically favoriting the Alli for future use by the user. The last item on the dock is a comment section, which logs all Alli comments from each chat session. This archives all comments from a single Alli, or multiple Allis. This dock is expandable and retracts cleanly into a single “expand” icon on the top left of the screen.
Similar to the left side dock, there is a expandable right side dock with Alli resources. This includes a digital version of the Alli volunteer handbook with search included, a “phonebook” with other Allis names and transfer buttons to defer a user to a different Alli, as well as emergency listings.

The Alli then has a typical chat area, with a textbox and “send” button. Preceding the “send” button is a easily accessible emergency button, that will send an automated alert to the user advising them to start a voice chat with the Alli for further emergency assistance.

Our mobile phone application has similar functionalities, but both the left and right side docks are displayed as a drop down. Each of these functionalities are very intuitive and easy to work with. Most are graphics and buttons, and don’t have any vagueness to them. Most of the usability for both Allis and users revolves around a typical chat interface.
Testing Method

Participants

We had a variety of participants involved in our study. Since it is not appropriate to seek out suicidal or severely troubled LGBTQ teens and get their take on our interface, we decided to focus on the volunteer (Alli) side of the application and determine whether that portion of our interface was efficient. Also, since our volunteer interface is a bit more intricate, we decided to test individuals that display a desire to help others. We also chose four participants with different educational backgrounds, ages, sexual orientations, and experiences with struggles in their own sexuality. Our first participant, A, is a 18 year-old heterosexual female UMD student. Our second, B, an 18 year-old male who prefers to not label his sexuality. The third, C, is a 21 year-old heterosexual female, and the last, D, a homosexual 30 year-old graduated from St. Mary’s College. Participants A, B and D were found through mutual friends of the proctors, while C was a willing participant found on campus.

Study Environment

All four participants were tested in H.J. Patterson Hall on UMD’s campus after hours so there would be little distractions of other students. The room was warmly lit, and cool, comfortable temperatures. Noise distractions were at a minimum and each user was in the test room by themselves with two proctors.
Tasks

When testing our tasks, we modified them slightly to make them easier to test. The easy task was getting a notification on a mobile device, disarming it, and then transferring their chat to the web based interface. Our second, medium task, was simulating that the Alli (test subject) is in class. They are asked to do as they would do if they had to defer a chat, and what other options they would want. Participants will be asked to open up Alliance Online Interface and seamlessly sync the conversation. Our hard task was to have the Alli determine whether the emergency button should be used when interacting with a particularly disturbed user, and determining whether all of the icons, logs and supplemental volunteer references were easily located and thorough.

Procedure

Our test subjects were all asked to narrate how they were to complete each task that they were told to complete. Tanya introduced the project to our subjects, and explained its purpose, the target users, and the desired goal. David presented background information relevant to the other two tasks, and subsequently conducted them. Tanya video recorded the subjects. Test subjects were instructed to speak lucidly during the process.

Open ended questions were given to the participants to allow them to give any feedback with the task at hand. Even if it wasn't pertinent to our exact question, we wanted as much information as possible. We refrained from taking notes, and focused on the tasks since we filmed the participants’ tests.
Test Measures

Our testing was focused on user preferences, so we concentrated on self-reporting test procedures, and asked our participants open-ended questions rather than counting numbers of errors or measuring usability data. Our users provided us with thorough descriptions of their thoughts and expectations during the process, shedding light on essential design oversights, and interface enhancements, including the want of context-dependent text descriptions; expandable simplicity.

This allowed us to focus on the process data rather than the bottom line data, and because our study was scenario-based, these results were much more beneficial than any raw data would be. Counting and measuring wasn’t isn’t our goal for this part of the refinement process, but honest interaction and immediate concerns with our prototype were our emphases.

Results

We did not expect to gain as much from testing as we actually did. All of our users provided some amazing feedback, great ideas, and valid revisions to our interface. Starting off with Participant A, she was introduced to the interface and automatically showed a comfort with many of the features. She got through the first two tasks very smoothly, but hesitated at the third, emergency task. Participant A stated that although the “Danger Rating” and chat logs were a great idea, it was hard to tell what the Emergency button actually did. Were the authorities called? Who was notified? She thought that the simplicity of the interface was a great, but hoped that the whole application could be more centered. She added that there should be more resources for the Alli, similar to task three, for emergency situations when the Alli was not completely sure of what to do. She would have liked an automatic notification when a users Danger Rating gets too high. When asked about automated notifications sent to users
when contacting an Alli when they are away from their computer, **Participant A** was completely
against any type of templated away message. She said that the Alli should either be online or
offline, no in between. This was an interesting perspective as to the perceived notion of the
visibility of system status, which in our case would be exactly how real-time the connection
between the volunteer and the user currently is, and whether or not it is completely apparent
how live the connection is. It also begged questions about user control and freedom; would the
user continue to feel in control if the connection with a volunteer was interrupted for any period
of time?

**Participant B**’s testing was underway next, and he gave us a lot of great ideas. His first
reaction was that the interface was a bit too cold looking, and that it needed to be warmer with
more color. He mentioned that it looked like a trustworthy application. He went through all three
tasks with ease and not really any noticeable issues. He showed great concern in how the Alli’s
would be chosen. He mentioned that if he were to ever use an application like Alliance, he
would be worried that there would corrupted Alli’s, like bashers, that would be a huge issue. We
acknowledged his concerned, and mentioned our ideas of profiling and screening volunteers
similar to current suicide hotlines and the Trevor Project. He mentioned that he would not want
an automatic notification when a user’s Danger Rating gets too high, and that it is the
responsibility of the Alli to know when a user is a threat to themselves. After clearing that worry
from his head, he thought that we went about breaking the voice barrier of hotlines very well.
When **Participant B** was asked about automated responses on mobile devices, he mentioned
that there should be multiple options for a template away response, or a custom one. He also
expressed the same concern as **Participant A** that automated messages could give off the
wrong message to those who noticed, but thought that it could be a useful customization for an
Alli.

**Participant C** had a lot of similar reactions and commentary. She also completed all of
the tasks nearly perfectly. As mentioned by **Participant A** as well, she wanted more description
of what the Emergency button actually did. She mentioned that if the guideline feature actually
worked, she most likely would have looked up what the button did herself. Similar to Participant A, she thought that having an automated Danger Rating warning would be helpful in serious situations. Participant C reinforced that fact that since we are dealing with troubled and possibly suicidal teams, every second is crucial. Every resource that an Alli could possibly need, including professionals in the users area should be available in the references dock. When asked about the automated mobile responses, Participant C did not think it was a bad idea to send an automated response. She said that having some customization would be a great idea.

Participant D was tested last, and was a initially a bit confused about how the mobile and web interfaces overlapped, but David cleared up his confusion. He was very adamant about having another sidebar on the screen with previous chats so the Alli can be aware of all of the users previous chats. He did not believe that there should be an type of emergency warning deployed if a user’s Danger Rating was too high, and that similarly to Participant B, the Alli should be responsible for knowing that.

Revisions

We decided to change a few aspects of the design of our interface. One of the main trends was the participants wanting more descriptions on the icons, such as “Emergency” and “Send Contact Information”. They wanted to know what these icons do and maybe if you hover over one if it could give additional information. For example, if the cursor was over the Danger Bars section, you see a detailed blurb about why it’s at the rating it is.
Another complaint was about deferring the notifications. Most of the participants wanted a quick option when notifying if they were in class and couldn’t type an entire message, but just quickly respond. A solution they all seemed to hit was a button which replied with “I’m sorry I’m not available right now, but I will be in _____. And the blank would be filled in with a custom time the Alli would input. However, we are still debating whether or not Alli’s should be able to disconnect during a session for any reason, as they are expected to attempt to be able to know when they are able to commit to a session, and reasonably conclude it. If implemented we would integrate a countdown timer that would appear to the user, greying out the chat box as a live-updated countdown appeared, notifying them to continue typing but informing the user as to why the Alli was not responding in real-time.
In integrating all of the user concerns about information visibility for the volunteer perspective of the application, we decided that we would have a "Novice Mode" of the interface, for Volunteers that have recently completed their training. Having a toggleable novice mode, while also retaining expert shortcuts and visibility design would provide the necessary flexibility and efficiency of use for experienced volunteers as well as recent pledges. This mode would include extra information, such as tool tips, suggestions, and reminders as to where information can be found, that would appear in sessions with an end-user. Each aspect of the user-interface would include extra tooltips, and context-dependent information for interface elements, that would help a novice volunteer become accustomed to using the available features until they were comfortable enough as expert users to feel resourceful without any further prompting. In designing our volunteer interface this way, help and documentation can be gradually disseminated, and eventually dissolved, as well as disabled for those who are more familiar with
console interfaces; we will be simplifying and obfuscating documentation for the end-user interface, as they will require less features than volunteers.

Another revision that was suggested was making the guides/rules more visible on the site, and making it accessible while simultaneously chatting with the user. Much like having multiple windows open, the user could navigate the user guide and help documents while still having the window of the chat box open on the left, so communication would still remain seamless. Either way, having every tool at your fingertips was deemed highly important.

We had a general consensus of an appropriate color scheme, even though Participant B wanted the colors to be a little warmer. But, we needed to fix the organization of the boxes, making them centered and laid out thoughtfully. A few participants felt as though a more beautiful and simplistic design would be beneficial to them when using the application day to day. Participants also enjoyed the idea of having the computer and phone versions of the application synced so switching between the two was simple, so this was retained as well.

Summary

Overall, we came across some important findings through testing our prototype. We found that there were a lot of features that went across very well to our test subjects. Our interface’s aesthetic and minimalist design properties were favorable among all of our test users. It was unanimous that this kind of a clear cut interface was crucial for troubled teens, with no over the top animations or graphics, and that it facilitated recognition rather than recall. We learned valuable information about the need to embed our volunteer interface with additional, optional visible documentation while maintaining expert interactivity, and devised a way to gradually allow new volunteers to become comfortable and familiar with the simplistic yet powerful organization.
We also found most participants wanted more information about the icons on the interface, whether that came in the form of a hovering blurb when cursored or a linked description. Even though these participants use computers regularly, they are not as computer savvy as a computer-based major so clarity is key with the Alli’s interface. The emergency button seemed to be a concern, as the degree of which it was an “emergency” was unknown. We found that all of the test subjects cared enough to not want to hit the emergency button prematurely.

The preferred method to reply to users varied for each participant. Although some wanted a template away message or response, some did not want it due to the fact that it was too computerized. Concerning the danger rating, some participants wanted a notification that suggested they use certain features, but others believed that it was unnecessary and the knowledge of training was enough. We that in addition to thorough online training, a “Novice Mode” would be enabled by default, which would continue to give additional information to the volunteer, and allow them to customize the amount of additional prompting they would receive while operating, as well as allowing them to disable them completely when ready.

Lastly, syncing information was imperative to our participants because of the multi-platform interface. So, from our findings we have incorporated a synchronized chat stream with the phone and computer. Also, a history of chat logs that is loadable for each user as well as any notes Alli’s have left under a user’s account.

**Video Report**

All four of our participants agreed to having us videotape their testing sessions. **Participant C** was a bit hesitant, but it did not seem to have a major impact on her performance or thought process. From a proctor’s standpoint, it was a bit tense when first recording, but things quickly loosened up when we started talking openly to the participant. Our flow of conversation while describing Alliance sent all four participants into imagining that they were actually in the scenario that we were describing, so all of us forgot that we were even
videotaping. Obviously, having someone walk around you with a camera when being asked questions will have an impact on you, so taping is an added variable in our test case that could have added more pressure to the participant.

Even with the pressure of two people and a camera hovering around you, the participants took the test very seriously, and said their thought processes aloud in a very clear manner. They gave their criticisms and concerns freely, while giving suggestions of how they could be fixed. When asked open ended questions, we were surprised as to how fully and detailed the participants answered the questions, so we were able to attain more information than previously thought. We found videotaping was beneficial because we could go back and review the tapes when making our revisions, and it allowed us to focus on the study and not have to take notes during it. This was mainly because our participants were willing to be taped, if we hadn’t had this opportunity, we would have had to take copious, incomplete notes in the place of the video.

Appendix

CONSENT FORM:

You will be conducted in a research study for Alliance, a suicide prevention chat application. This research poses no risks to you other than those normally encountered in daily life. All of the information from your session will be kept confidential, unless you choose to disclose it. Your data will have a number associated with it. After the research is completed, we may save the notes for future use by ourselves or others, but your name will not be included.

Your participation in this research is voluntary, and you are free to refuse to participate or quit the interview and observation session at any time.
If you have questions about the research, you may contact:

- Tanya Dastyar (301) 219 - 3292
- Aymon Fournier (301) 850 - 2503
- David Todd (410) 491 - 5379

You may keep a copy of this form for reference.

The details of this study were explained to me by:

Investigator Name: _______________________________________________________
Date: __________________

Participant Name: _______________________________________________________
Date: __________________