Second Evaluation and Analysis: Job Tracking

William Richard and Guvenc Usanmaz

April 16, 2013

1 Experimental Setup

The experiment took place in almost empty living room at the home of most of the users. We kept the room quiet, with few visual distractions, and sufficient light. All subjects were tested on the same 13.3 inch screen Windows 7 laptop with an external mouse - the users were able to use the laptop's track pad if they chose, but all used the USB mouse. We sat on either side of the subject, in order to observe their actions and discuss their thoughts with them. We asked our subjects to verbalize their thoughts by speaking. We spoke to the subjects as little as possible during the testing, and did not help them if they were struggling with a part of the program. We presented the users with two windows - half the screen had the list of tasks that they were to perform, while the other half of the screen had our website loaded in Google Chrome. This presentation was exactly duplicated for all of the users. Finally, we made sure that the website started on the same page, with database in the same state for all subjects.

2 Rationale of the Metrics Recorded

It is important to us that our system is intuitive to use, especially since the purpose of the system is so specific. Thus, most of the questions we asked had to do with ease of usability, as well as how the user reacted to the perceived system appearance and functionality. Thus, our questionnaire focused on how easily the user was able to navigate the system, if it did things that were confusing, and if they enjoyed using the system. We used the Likert scale for as many questions as possible, to provide a question framework that was familiar to our users and hopefully get more consistent answers. Sadly, we did not know about counter balancing surveys while writing our questions, so we cannot verify if our attempts for consistency were successful.

3 Summary of User Demographics

Name	Highest Level of Education	Major of Study	Computer Comfort Level	Age
LB	1 semester of graduate school	Psychology, and then Behavior Analysis	5	24
SS	4 years college	Math	5	23
CO	Masters	Math	5	25
LL	Some Graduate School	Asian Studies and Anthropology	3	26
CM	Bachelor's	Computer Science & Physics	5	25

4 Results

Our system is currently presented in a much more technical manner than the average user is able to comprehend. In figures 1, 4 and 7 the positive reviews were from our subjects that had computer science training. They all commented that the only reason they understood the system is that we were using technical jargon that they were familiar with. To further support this conclusion, the non-computer science trained subjects noted that they did not understand much of the vocabulary that we were using. The best example of this misunderstand was the use of "key" and "value" to store attributes. Not only was this language confusing to the lay person, but were difficult for the trained subjects to understand as well. They understood what 'keys' and 'values' were, but did not know how to best populate those fields. This can be seen in the responses in figures 5 and 9- almost every test subject was not sure how to proceed at least once during testing, and many users had this problem several times. Along the same line, almost all users felt that the way to achieve their goals was neither clear nor straightforward. This frustration can been seen in the responses to figure 3.

To our credit, our system was very flexible, and did not punish mistakes, as you can see from the responses to figures 8 and 10. Almost all of our users, even if they had trouble initially, felt that our system allowed them to explore, and discover solutions that worked for them. Even with this being the case, not a single user ended up using the system in the intended way. Also, on a positive note, the esthetics of the system have been greatly improved, as you can see in figures 2 and 6. One user mentioned that the system could be "more beautiful", but he also mentioned that it had come a long way from our previous prototype. To be fair, the testers may not have mentioned superficial features because the functionality was so badly presented.

To address these issues, we need to make some major changes both to the intended work flow, as well as the page that the user uses to add new entries.

The intended overflow is currently very rigid in some ways (you need to add a company before you can add a job at that company) and almost flexible to a fault, as one user put it, in other ways (the attributes a user can define about each entry are completely flexible, which makes it difficult for a user to know what to store). Along these lines, the current "Add Entry" page is essentially identical for all entry types. This lead to some confusion, when users forgot what type of entry they had chosen to add. We need to change the add pages to make them entry type specific, to both provide more structure to the user, and to make it easier for them to know what type of entry they are adding.

Finally, there are a plethora of important graphical improvements that we found that needed to be made. Most notable, and touched upon already a bit, is indicating to the user which page they are on - several users lost track of what page they were on, and that made their experience much worse. This could easily be achieved by highlighting or bolding the current page's icon in the navigation bar.

5 Future Work

First, and most notably, we need to make the changes described in the previous section. This should make the system's function both clearer, and adapt better to user expectations and work flow. These changes include making entry type specific "Add Entry" pages, adding the ability to edit entries once they are added, and making the user's location clearer.

In the future, we would like to expand our testing, to get more feedback, both about the interface and functionality of our system. We should start by choosing a wider variety of test subjects, with different education, age and computer experience background. It would be even better if they were current job seekers, so they could test the system during their job search. In a test involving current job seekers, we would likely want to have access to the data they were adding and what sorts of entries they were creating. This would allow us to better tune the system to common use cases, and have it better match the work flow that users expect from it. In this case, we would want to check in with users periodically to see what problems they've encountered, what features they feel are lacking, and which aspects of the site they have found confusing.

Many job seekers use a large spreadsheet to track their job search, and our goal is to replace that spreadsheet. We could try to query test users about how they have used a job tracking spreadsheet in the past, what advantages and disadvantages it provided compared to our system. We might also explore how different people organize those spreadsheets, to provide insight in how to better organize our site.

6 Charts

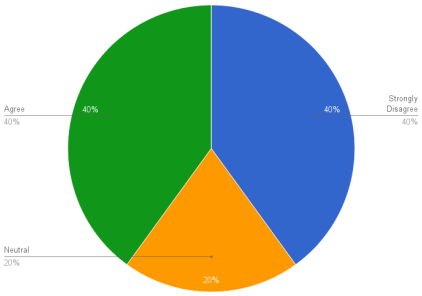

Figure 1: Response for "The system was easy to use."

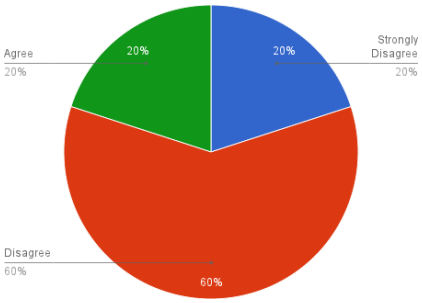

Figure 2: Response for "I liked the general look and feel of the system."

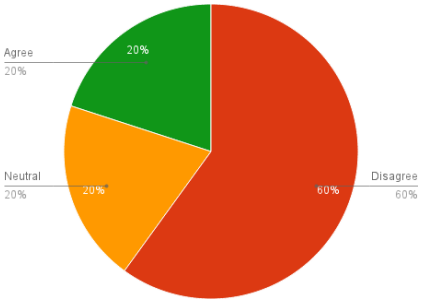

Figure 3: Response for "I enjoyed using the system."

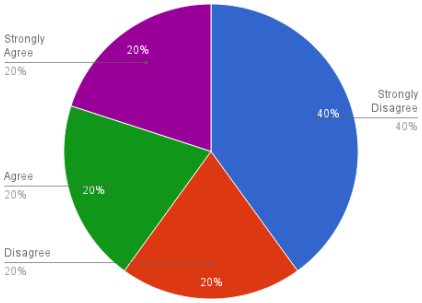

Figure 4: Response for "I clearly understood the intended purpose of the system, and how to achieve those goals."

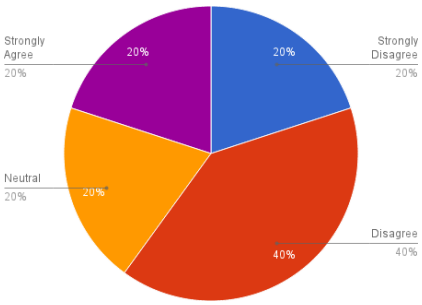

Figure 5: Response for "I never experienced a time while using the system where I was unsure of what action to take next."

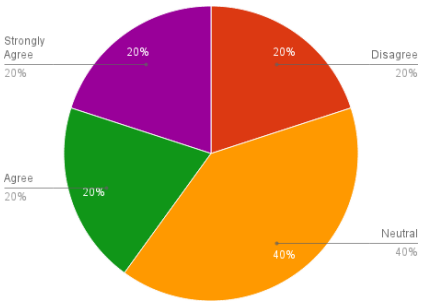

Figure 6: Response for "The information presented was organized in a clear way."

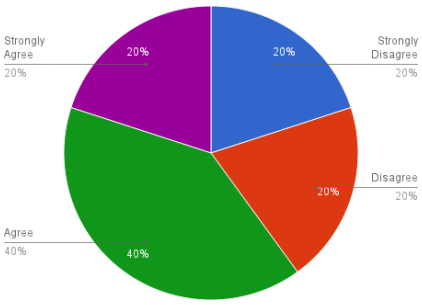

Figure 7: Response for "Learning to operate the system was easy"

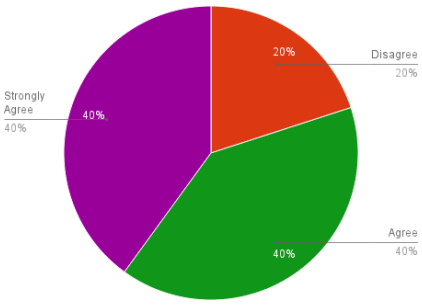

Figure 8: Response for "Exploring new features by trial and error was easy."

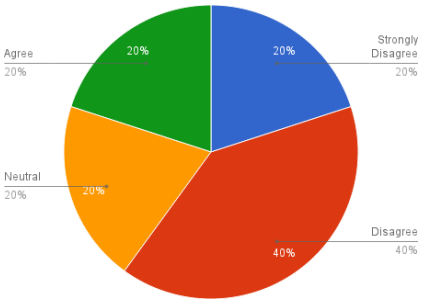

Figure 9: Response for "Performing tasks was always straightforward."

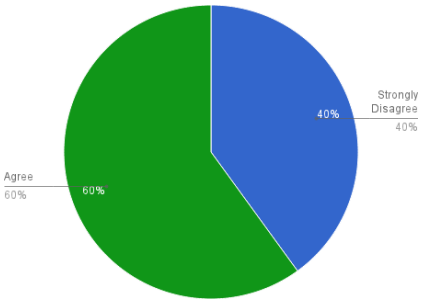

Figure 10: Response for "I easily adapted to using the system."