Final Project Summary- Chase Hiatt, Alex Bower, Adam Rollins

Final Prototype Link

See video for visual guide of instructions on how to set-up and use our Chrome extension. The link to download the zip file containing the extension is below. Once installed clicking the search button on the BYU CS website will forward you to our search results page with pertinent results.

https://drive.google.com/file/d/14zOtl9k3hOVY6O2hVXBpPlXqo5eTn55C/view?usp=sharing

Video Link

https://www.youtube.com/watch?v=Ak6GY1Rk9g0

Problem Statement

Specific information on the CS department website is hard to find and the broken search bar leads to frustrated faculty and unsatisfied users. This makes it very difficult for students to locate the information they need about classes, labs, and professors.

Interaction Design Principles and Patterns

We really wanted our project to be easy to learn, fast to use, and have relevance to the user. We focused on the design principles of efficiency, minimal download time, and relevant to the user's needs. Our search feature needs to be fast, accurate, and find relevant results. If a user feels their search is too broad or they got too many results, they can use an advanced search to narrow down their results. Search results contain minimal bits of information to help the user know what content the page holds, and how this page might be meaningful to them.

We also focused on the principles of learnability and habituation. We wanted the search feature to be easy to use and to be familiar to the user. Many other websites have search features and results pages. The main BYU website has a search page with results, which we used as a basis for our design. We used these same features and a similar design so that the user will feel comfortable with the search feature and be able to use it effectively right away.

Paper Prototype

Paper Prototype Usability Studies Results

Doing user interviews was more insightful than we had expected. Prior to our three interviews, we thought our design was really solid but as we were doing these sessions, we were able to more clearly see how a user would interact with the site. From this user feedback, we were able to update our design to better suit the needs of the end user. One unexpected area we saw users struggle was in performing a different search after already searching one thing. Our users were unsure if they should go back to the home page and use the same box from before or if they should search again from the results page.

While we were able to glean lots of valuable feedback on other features, the ambiguity of a paper prototype meant users weren't sure what was an input box and what was a simple span of text. From this we learned that paper prototypes have their places in the initial stages of design, but are not a perfect proxy for the true user experience. Moving forward, we will continue to use paper prototypes as appropriate before ultimately moving to more well defined interfaces for the final design stages.

Our search feature did a good job at providing the tools necessary for users to find what they are looking for even if they don't see a relevant result on the first try. The results are clear and provide a brief description of the content on each link, giving the user just enough information to make a decision on whether or not to select that result or continue scrolling through to the next option. When using the advanced search feature, some users experienced a small difficulty understanding how to apply their desired filters to the search. Including an 'apply button will resolve these issues. One member of our paper prototype study expressed concern how some of the options for our advanced search were slightly ambiguous. To fix this, we have relabeled some of our options to be more specific for the user.

Paper Prototype Interview Instructions

1) Read the following
    a) "Hello, my name is _____ and I'm going to be interviewing you today about a new design for the BYU Computer Science website. As a student at BYU, your feedback is very important to us as we move forward in the design and implementation stages of the redesign. Please remember that we are not testing *you*, but rather the design. As we continue through the experiment, just talk us through what you are thinking so we can better understand a user's thought process. You are here to help us improve our

design, so please don't worry about hurting our feelings. This is just a prototype and none of us are particularly attached or invested in the current design. Any suggestions or concerns are encouraged and are helpful as feedback.

This test will be done with a paper prototype. At each stage, you will be presented with a task and a view. We want you to tap the 'screen' where you think you should click to accomplish the task. We may adjust the prototype to react to each tap you do. After each task, we will ask you a series of questions pertaining to that task to better understand your thoughts during completion of the task. Do you have any questions before we begin?

2) Open web browser to BYU Computer Science website.

Paper Prototype Interview Tasks:

1) Search for TA jobs on the BYU Computer Science website.
    a) Followup questions
        - How did you feel while completing this task?
        - How difficult was it to complete this task?
        - Were the results relevant to your needs?
2) Navigate to the BYU Computer Science website and search for upcoming club events in the next 30 days
    a) Followup questions
        - Would you use an advanced search feature? Why or why not?
        - What parts of the process were intuitive? Which parts were difficult?
        - Where would you expect the advanced search feature to be available

Paper Prototype Interview General Followup Questions:

- How do you feel about our search feature?
- What would you change about it to make it better?
- Is there any other feedback you would like to give?

Low Fidelity Prototype

Low Fidelity Usability Studies Results

For this assignment, we were tasked with creating an interactive prototype of our design and testing it on a few different users. From working with our paper prototype, we had seen just how important true interactivity is for usability. This phase was an important step in the direction of a real interactive experience. While Figma was a great tool for testing, it was not as interactive as we would have liked. This meant users were stuck going through a linear prototype which was not representative of a real website experience.

Even with these drawbacks, users were able to provide valuable feedback on the overall design of the various pages and features. One feature we had put in the prototype was the ability to search by a specific date range. Some of our users thought this search filter was too specific and involved. They would prefer to instead have simple checkboxes which would allow either a) sorting by upcoming dates or b) filter by next thirty days. Another piece of design feedback we received was about the colors on the results page. One participant noted that our keyword search box had the same light background as all the results. This made them think it was just another search result until they looked closer, leading to confusion about how to perform subsequent searches.

After listening to the feedback from our users, there are a few design changes we will make to the final prototype. One common piece of feedback was about the lack of appropriate colors in the prototype. Not only was our rough prototype missing color (which was to be expected), but our light shades of gray were not always great choices for providing contrast. To respond to these issues, we will be adding colors that synergize well with BYU's published style guide. As previously mentioned, we have taken another look at some of the advanced search U.I. elements and will be redesigning them to be more intuitive and straightforward. One other change we will be making is improving the description text for some of the results. This means adding things like pay, full/part time and professors to job listings as well as trying to have better results for other types of pages.

Someone suggested adding regex search features. We won't add this because although it might be useful to some people, most people will not use this functionality. Someone suggested removing the 'x' on the search box. The 'x' button to clear a field is a common pattern, and other people said they liked it being there. So we will keep the 'x' button to try and accommodate more people. One feature that was recommended was a search history. While a search history may be useful when performing repeated

queries, we believe users would just bookmark their page if typing a search in each time is troublesome.

Low Fidelity Interview Instructions

1) Read the following

    a) “Hello, my name is _____ and I’m going to be interviewing you today about a new design for the BYU Computer Science website. As a student at BYU, your feedback is very important to us as we move forward in the design and implementation stages of the redesign. Please remember that we are not testing *you*, but rather the design. As we continue through the experiment, just talk us through what you are thinking so we can better understand a user’s thought process. You are here to help us improve our design, so please don’t worry about hurting our feelings. This is just a prototype and none of us are particularly attached or invested in the current design. Any suggestions or concerns are encouraged and are helpful as feedback.

    This test will be done with an online prototype. At each stage, you will be presented with a task and a view. Not everything will be clickable as this is only a prototype. Double clicking the screen will highlight possible things you can interact with. We want you to click the screen where you think you should to accomplish the task. Again, this is only a prototype so some things will be filled in for you when you click them. After each task, we will ask you a series of questions pertaining to that task to better understand your thoughts during completion of the task. Do you have any questions before we begin?

Low Fidelity Interview Tasks:

1) Navigate to the BYU Computer Science website and search for TA jobs

    a) Followup questions

        - How did you feel while completing this task?
        - How difficult was it to complete this task?
        - Were the results relevant to your needs?

2) Navigate to the BYU Computer Science website and search for upcoming club events in the next 30 days (Hint: The ‘filter by’ feature may be useful)

a) Followup questions

- Would you use a ‘filter by’ feature? Why or why not?
- What parts of the process were intuitive? Which parts were difficult?
- Where would you expect the ‘filter by’ feature to be available

Low Fidelity Interview General Followup Questions:

- How do you feel about our search feature?
- What would you change about it to make it better?
- Is there any other feedback you would like to give?

Final Prototype

Final Prototype Usability Studies Results

For this assignment, we took our figma prototype and created a high fidelity functional search feature and results page. From working with our paper prototype, we had seen just how important true interactivity is for usability. Our Figma phase was an important step in the direction of a real interactive experience. While Figma was a great tool for testing, it was not as interactive as we would have liked. This meant users were stuck going through a linear prototype which was not representative of a real website experience. From working with our Figma project, we wanted our website to have good interactivity and functionality. Our final design uses a chrome extension to integrate with the CS Website’s search feature and give the user a new results page.

We talked to eight additional people about our new high fidelity prototype. Their insights were extremely helpful in polishing up our final design. Throughout the process of showing our final prototype to people, we had two different designs for the results page and a toggle button to switch between the two. Using this we were able to understand which parts of each design were good and which ones needed improvement. We then took the best parts of both designs and worked them together to create a nice looking, professional search results page.

What We Changed Based on our Results

There were several minor adjustments we made from the feedback we received. We focused most, if not all, of these edits to help improve the design of a search results page. These modifications include: removed colons and other unnecessary text,

left-aligned and squared images for link results with images, centered and adjusted the search box size, and updated to using the official BYU themed color scheme.

Issues We Didn't Fix

We were unable to implement a clear button in the right side of the search bar. We did not include this feature because of the limitation of the elements we used to create to page. We were unable to also listen for the 'enter' key after the user types a search query from the main CS department webpage due to the same limitations. The date picker would work better if the rest of the site had time stamps on their pages. Also some things that you might expect to have a page, such as events, do not have pages so they do not get returned in the search results.

Final Prototype Interview Instructions

1) Read the following

    a) "Hello, my name is _____ and I'm going to be interviewing you today about a new design for the BYU Computer Science website. As a student at BYU, your feedback is very important to us as we move forward in the design and implementation stages of the redesign. Please remember that we are not testing *you*, but rather the design. As we continue through the experiment, just talk us through what you are thinking so we can better understand a user's thought process. You are here to help us improve our design, so please don't worry about hurting our feelings. This is just a prototype and none of us are particularly attached or invested in the current design. Any suggestions or concerns are encouraged and are helpful as feedback.

    This test will be done online via the BYU CS department website. At each stage, you will be presented with a task. We want you to click the screen where you think you should to accomplish the task. After each task, we will ask you a series of questions pertaining to that task to better understand your thoughts during completion of the task. Do you have any questions before we begin?

Final Prototype Interview Tasks:

1) Navigate to the BYU Computer Science website and search for 'TA jobs' in the search bar on the top right of the screen. Click on the search icon.

    a) Followup questions

- How did you feel while completing this task?
- How difficult was it to complete this task?
- Were the results relevant to your needs?

2) Navigate to the BYU Computer Science website and search for professors who teach intro classes (Hint: Search for ‘intro’. Now use the ‘advanced search’ feature to refine your search to ‘professors’). Click on the search icon.

    a) Followup questions

        - Would you use an ‘advanced search’ feature? Why or why not?
        - What parts of the process were intuitive? Which parts were difficult?
        - Where would you expect the ‘advanced search’ feature to be available

Final Prototype Interview General Followup Questions:

- How do you feel about our search feature?
- What would you change about it to make it better?
- Is there any other feedback you would like to give?