

# RESEARCH PROJECT REPORT

March 21, 2019

I. **Research Project:** University of Washington Bothell Homepage Redesign

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## III. **Objective**

The overarching goal of the project is to determine how users interact with the University of Washington Bothell's main website in order to improve usability and user satisfaction and uncover opportunities for a new mobile application to enhance their lives.

Our objectives for our research are to discover the needs of the users of uwb.edu website. We want to uncover the pains points of the site and how to eliminate them. Apply various research techniques to cross verify findings. Examine how the uwb.edu site complies with good design principles and heuristics, in order to improve the effectiveness and efficiency of the site. Reveal answers to research questions to empathize with the users' and increase overall user satisfaction.

## IV. **Research Questions**

The major research questions addressed are:


- 1) How to improve uwb.edu site responsiveness?
- 2) How to increase uwb.edu usability?
- 3) How to increase focus on the goal of the website?

## V. **Methodology**

Our general research approach was to target the primary audience of the University of Washington Bothell website with specific questions that we believe could satisfy our research objective. To collect data, a triangulation of methods were performed including: questionnaires, competitive site analysis, heuristics review, usability testing, A/B testing, and interviews.

## VI. Personas

### Prospective Students

	<h3>Sara Smith</h3> <p><b>About Me:</b> I am about to graduate from high school and I'm looking for a good college to go to, but I'm dealing with so much right now its hard for me to get myself motivated to apply. The application process is so confusing!</p> <p><b>Goals:</b> Find a good school to go to that minimizes my stress, find a school that holds my values, and find a school that will help my future.</p>
<p><b>Facts:</b> Age: 18   Location: Woodinville, WA   Pronouns: They/Them</p> <p><b>Wants:</b> Explore different career paths   Find a university that values diversity   Values happiness and low stress</p> <p><b>Frustrations:</b> Confused by application processes   Financial concerns</p>	

## Current Students



### Tom Wilson

#### About Me:

I am a current student attending the University of Washington Bothell. I am new to the university, and am in my first year here. I use the university webpage for many reasons: exploring program options, finding the campus map, looking into clubs on campus, and accessing library services!

#### Goals:

I want to be able to access the university webpage on my mobile device because I'm always on the go.

#### Facts:

Age: 19 | Location: Bothell, WA | Pronouns: He/Him

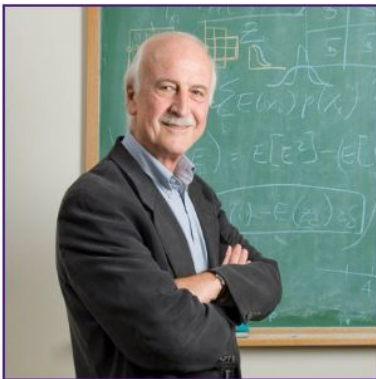
#### Wants:

Use mobile device | Find the campus map easier | Explore programs and degree options

#### Frustrations:

Campus map URL not easily identifiable | Navigation menu very cluttered | No mobile webpage support

## Faculty & Staff



### Dr. Stephan

#### About Me:

I teach courses at the University of Washington Bothell. I am a full-time, tenured professor and use the university's webpage to access payroll, HR, and benefits information. I have accessibility concerns because of deteriorating vision and motor control in my wrists.

#### Goals:

An accessible experience with the University of Washington's webpage.

#### Facts:

Age: 61 | Location: Bothell, WA | Pronouns: He/Him


#### Wants:

Navigate to faculty portals | Access payroll & benefits information | Reserve rooms for class meetings

#### Frustrations:

Small text makes website hard to use | Cluttered layout of navigation menu hard to focus on

## Alumni & Donors



### Natalia Valdez

**About Me:**  
I am a recent graduate of the University of Washington Bothell. As an alumni, I want to stay up-to-date on the university's news and also donate to the university when I can!

**Goals:**  
I want to be able to access the University of Washington's webpage on my mobile device in order to view alumni events and make donations.

**Facts:**  
Age: 25 | Location: Seattle, WA | Pronouns: She/Her

**Wants:**  
Use mobile device | Find resources for new graduates | Donate easily to UWB

**Frustrations:**  
No mobile webpage support | Hard to find new graduate resources

## VII. Major Findings and Results

In the following section, we will outline the research we did, the results we found from said research, and the “bugs” that were found based on the results of said research/

### VII.I Usability tests

#### **Test: Slide-out Menu Design for Mobile Device**

##### User Story:

As a busy current UWB student, I want to be able to navigate the menu on uwb.edu site easily on a mobile device, so that I can reduce the amount of time it takes searching to find the information desired.

##### Observation:

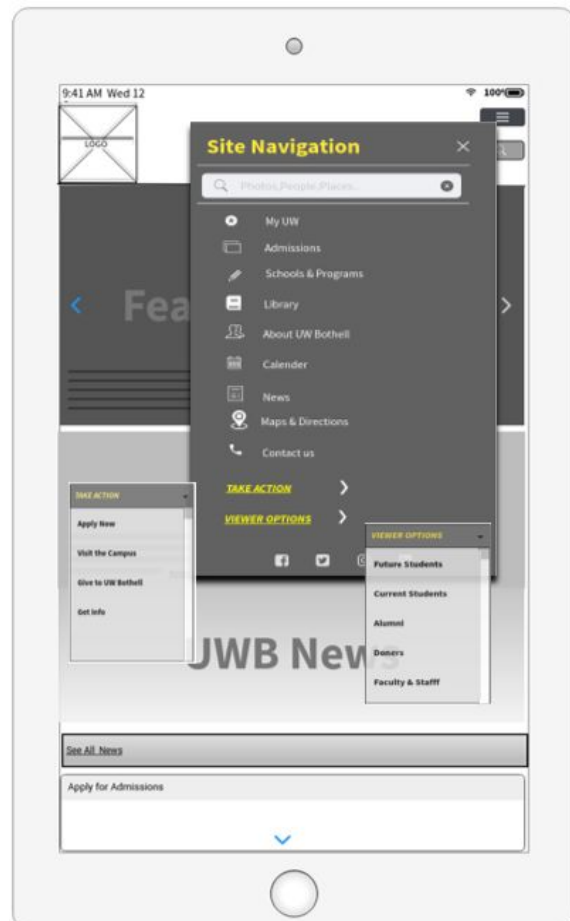
To implement this A/B testing on a mobile device, low-fidelity prototypes of the navigation menu were used to compare in contrast to the current version. I observed three separate current students perform similar tasks involving the use of the menu on the UWB site homepage.

When asked to use the slide-out menu via mobile device, to find information on the registration process, two participants used the search bar immediately and one participant selected the

“Current Student” button found in Figure 1-1. None of the participants had interest in the exploring the sub-menu found in Figure 1-2. The two participants that used the search bar used search words that would provide results that include information about the registration process for students. The participant that selected the “Current Student” button, was lead to a page that displayed resources, links and portals that were helpful and needed for the specific user. When asked to use the current menu bar via mobile device, the participant were observed to be overwhelmed by the amount of links in the drop down menu. Had to zoom in to see the links clearly enough to select the correct option. One participant accidentally clicked-on an unintended link and had begin search again.



**Figure 1-1:** Prototype Design Alternative #1 of a menu on a mobile device that slides out from right



**Figure 1-2:** Prototype Design Alternative #2 of a menu on a mobile device that slides out from the right

## Test: Number of Links

### User story:

As a student about to graduate high school this is a really stressful time in my life and I get overwhelmed easily. I want a college website that is simple and will not stress me out anymore than I already am.

### Observation:

When doing the A/B Testing for the number of links on the website it was found that it was a less stressful and less anxiety inducing for students that were given a smaller link selection to look at. Not only this but, it was found that for new students (or people that are not familiar with the web site) they could navigate quicker due to the reduced link clutter.

It was also found that students that are more familiar with the website take slightly longer to find what they're looking for due to the fact that some of the paths they usually take will no longer exist.

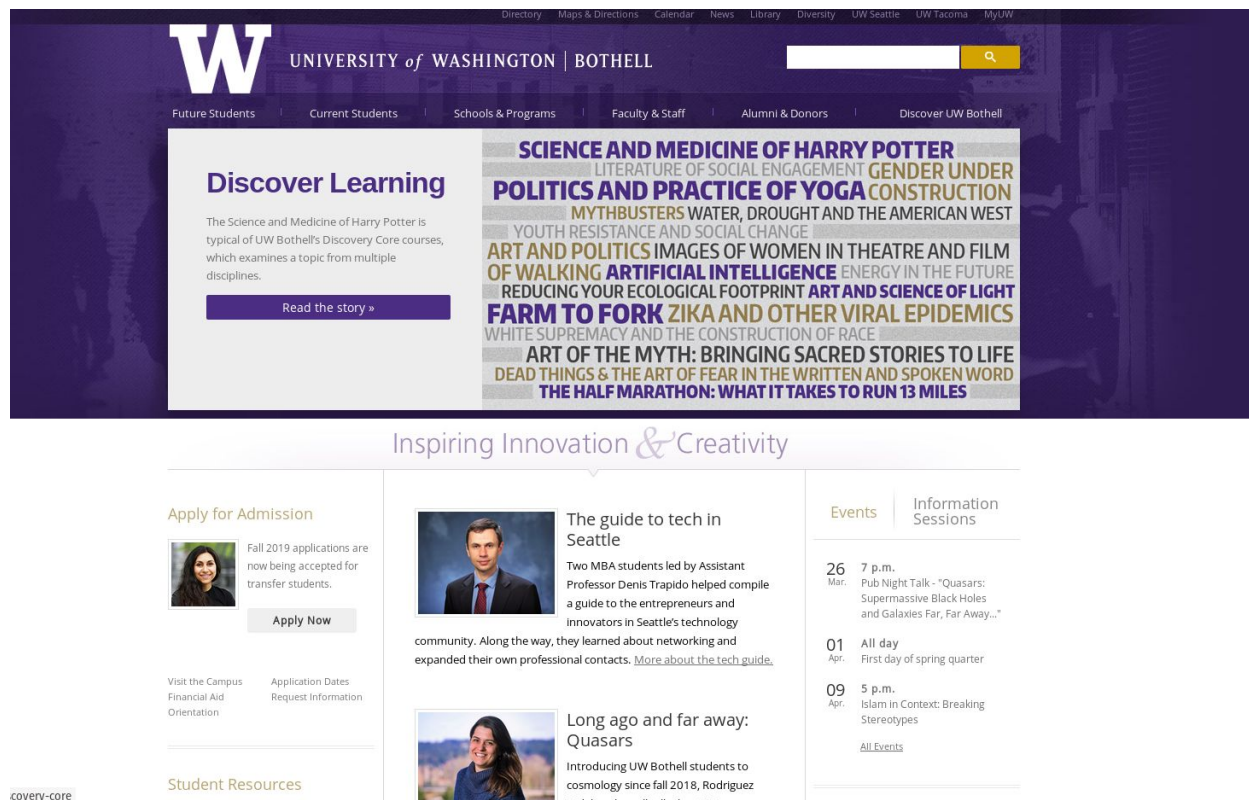


Figure 2-1: Normal website link count





Figure 2-2: Reduced website link count

## Test: Popular Links Locations

### User Story:

As a current student I am trying to do common tasks such as look at campus maps, registration, myUW, pay for parking, etc. and since the majority of students need these links constantly, I would like to them to be easy to spot.

### Observation:

After doing A/B testing I found that having a larger quick links bar at the top of the screen made the users actually notice that this bar existed and helped them find common links such as myUW and campus maps. Furthermore the use of icons for quicklinks helped students quickly find the links since spotting a picture seems to be easier than reading the text.

In addition for many other quicklinks such as registration, parking, advising etc. the current box where they are located in is difficult to spot, it is located in the bottom left corner where people tend not to look, and the users tended to look in the Current Students menu for these links. Thus moving the quicklinks for *Student Resources* into *Current Students* and keeping the *Current Students* menu short would help speed up the time students take to do these super common tasks. And for the less common links, they should be moved to a *More Links* page that is alphabetically ordered.

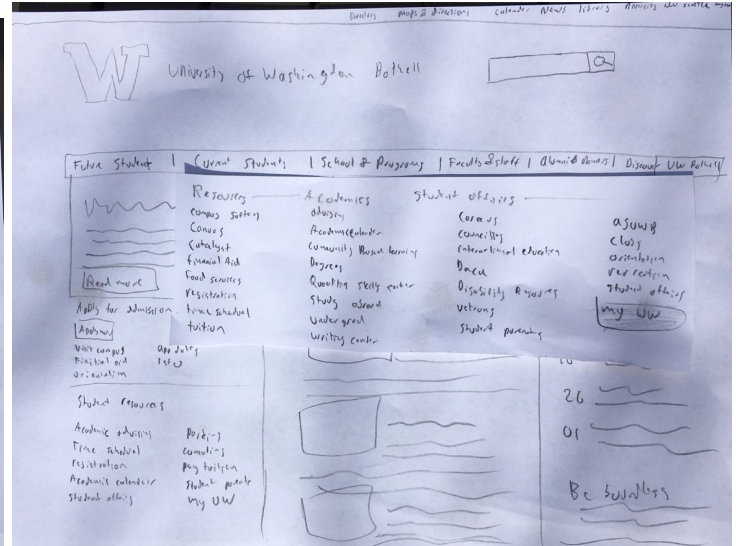
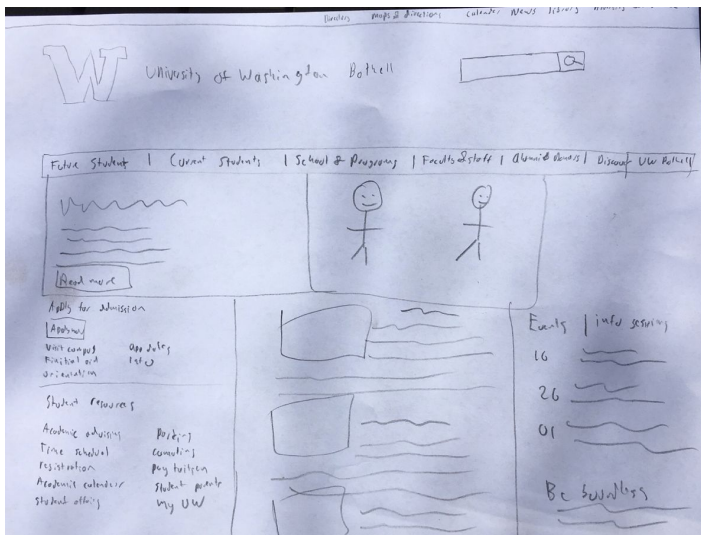
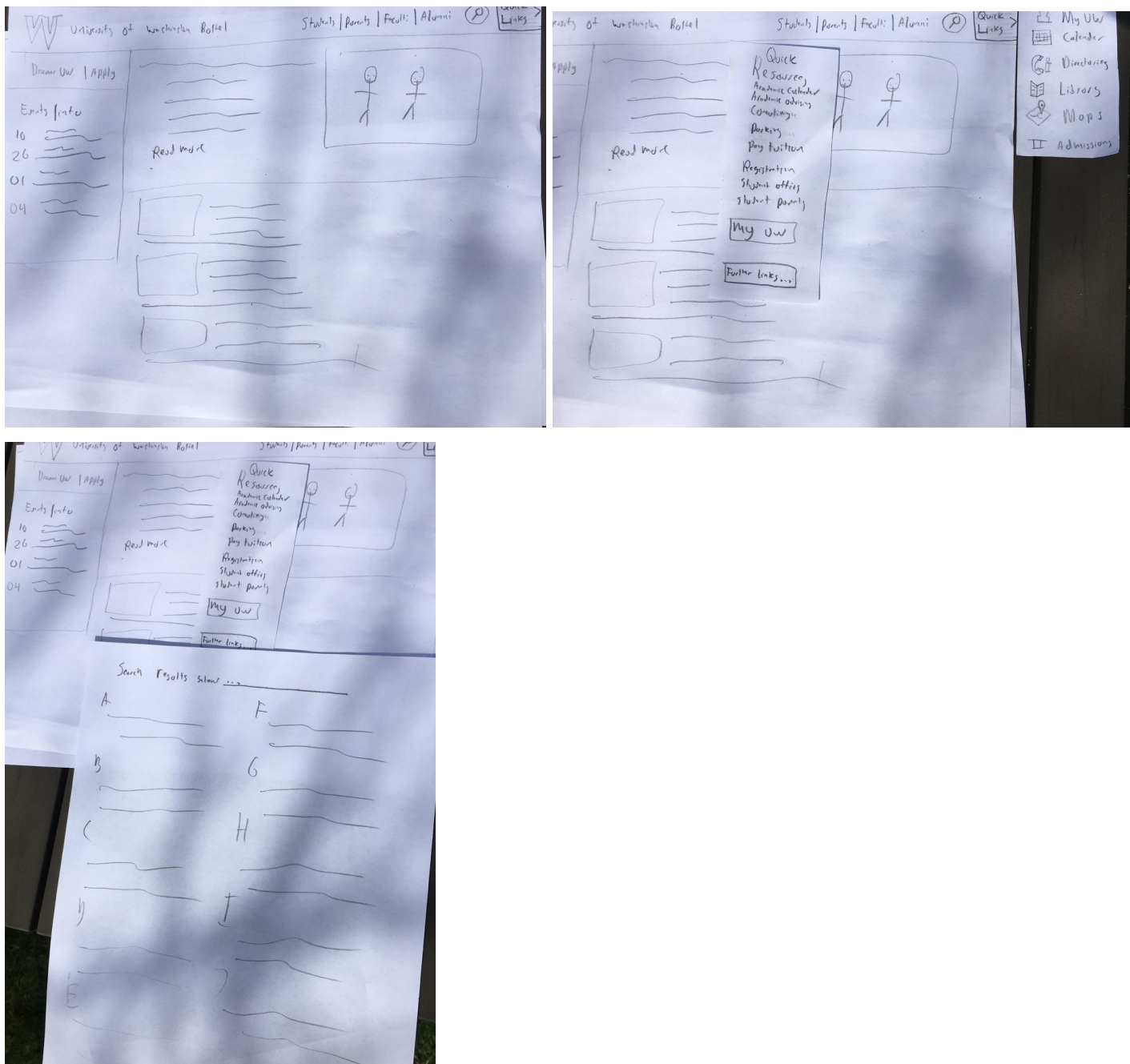


Figure 3-1: Current layout of website





**Figure 3-2:** Mockups of a redesigned desktop/mobile UWB homepage

## Test: Access to Canvas Service

### User Story:

As a UW student and want to access Canvas Services consistently to take a look at my courses content and syllabus, I would like to have this link in a visible button on the homepage.

### Observation:

After doing A/B testing I found out that channing Canvas button location to be on the top of the home page would make it easier for students to access Canvas service. I think student need to have a quick and smooth access to Canvas service because he spend most of his school time in it. The current location is hidden and not visible to anyone. In addition, we have two of these links one of them is in the current students list, and the other is in the Faculty & Staff list. Both of links redirect student and faculty to the same page and the content is just instruction. A button on the top of the page that redirect student to the login page of canvas is more important than this.



Figure 4-1: a new recommended location for Canvas Button

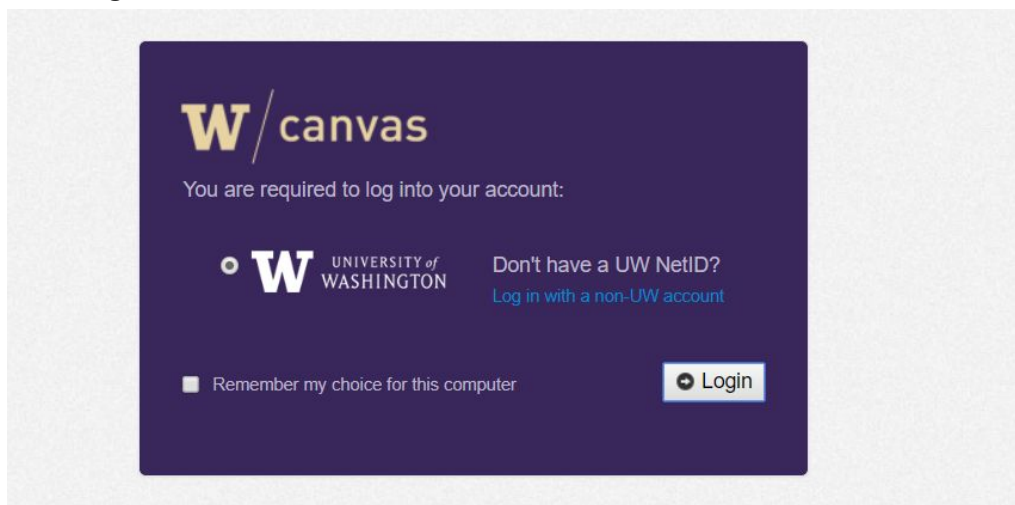


Figure 4-2: What user see when clicks on the Canvas button on the home Page

## Test: Size of Text in Navigation Panel (Mobile Display)

### User Story:

As an individual with accessibility concerns, I want to easily navigate to pages on the website using the navigation menu.

### Observations:

After performing A/B testing using both paper prototypes and lo-fidelity digital prototypes, I observed four different individuals with self-identified accessibility concerns attempt to perform guided tasks. The testers were first asked to perform the tasks with the current website on a mobile device, and then were given alternatives and asked to perform similar tasks.

In one case, an older user with motor control issues due to arthritis could not perform the given tasks because the text on the navigation panel is far too small. When given the alternatives, the user preferred the use of deep versus broad navigation, as shown in Figure 5-1. Two individuals with limited vision could not perform the given tasks easily. One user expressed that they would not use the site as currently presented, and the other said they would use the site only if absolutely necessary. One of the two low-vision users was able to perform the given tasks after constant zooming in and out on their device. Lastly, the fourth user who identified as suffering from sensory-overload was capable of performing the given tasks but did not enjoy the experience. She reiterated the interest in a deep versus broad style of navigation on mobile devices to reduce the amount of clutter and increase the font size on the panel.

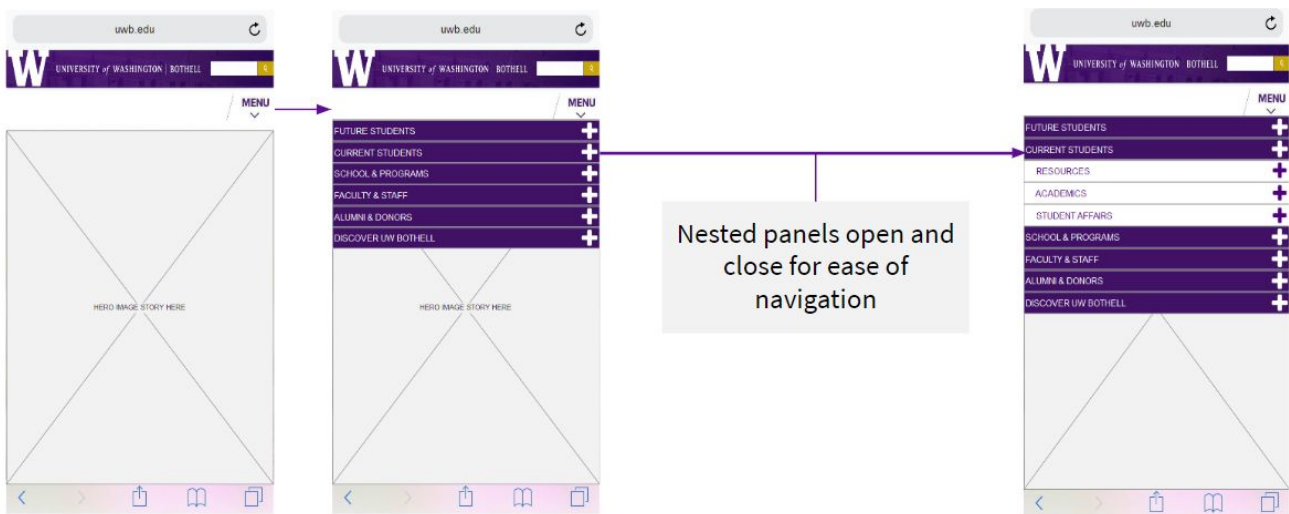


Figure 5-1: Prototype of deep menu navigation

## Test: Effectiveness of Site Home Page in Gaining Applicants

### User Story:

As a student ready for university, I am looking for places to apply to. I want to ensure I pick the right colleges to apply to because college applications come with a cost and stress factor- narrowing my search down is very important to me.

#### Observations:

For this test, I incorporated A/B testing with two different prototypes- the current website home page, and a revised version with some Fast Facts added near the apply now section (section shown in image below). Strong first impressions are a critical tool in marketing and because our site is our #1 marketing tool for new students, it is very important that we maximize our ability to appeal to users. Before doing this research, I didn't even know there was a Fast Facts page- there is some great information on this so I think we should definitely make it more accessible, this could be via a link on the home page.

I observed three different personas when doing my testing: a current UW Seattle CS student looking to transfer because of the difficulty of getting into the program, a current high school junior looking for colleges to apply to, and a current community college student looking for a university to transfer to. These three different individuals represent a user base that we see and want to appeal to.

I learned that the modified design, which included “Best Return on Investment of All WA Colleges,” strong diversity numbers, and relatively small total enrollment. These facts proved to be very effective- especially the best return on investment fact. My testers were surprised to hear that UWB offered such a great education and the facts played a strong role in showing that there is value in UWB over the main Seattle campus. My testers revealed to me that if they had not seen the benefits of the school on the homepage, they may have overlooked UWB and applied to only the Seattle campus instead. Some people don't even know there is a Bothell campus- this is why I find it absolutely essential to show prospective students the value UWB can provide over other school, these small details can be the difference between a student applying or not. We have the fast facts already, we should definitely give them more visibility because they contain some great information.

### Apply for Admission



Fall 2019 applications are now being accepted for transfer students.

[Apply Now](#)

[Visit the Campus](#)  
[Financial Aid](#)  
[Orientation](#)

[Application Dates](#)  
[Request Information](#)

### Student Resources

[Academic Advising](#)  
[Time Schedule](#)  
[Registration](#)  
[Academic Calendar](#)  
[Student Affairs](#)

[Parking](#)  
[Commuting](#)  
[Pay Tuition](#)  
[Student Parents](#)  
[MyUW](#)



community  
expanded t  
[guide](#).



far, far awa  
Bothell. [Mo](#)

**Figure 6-1: Current apply now section**

### Test: “Apply now” Section Usability

Scenario: A current high schooler, interested in multiple colleges, wants to apply to UW Bothell to come in as a freshman for Autumn 2021.

Tested:

- Time to find apply now button
- Time to get to actual application page
- Opinions on which was better (current or prototype)

Observations:

- Participants noted website was outdated
- Took about 2 seconds faster, on average, to find the apply now button
- Took about 4 seconds faster, on average, to get to the application portal
- Consensus was that the prototype was better
  - More information.
  - More relevant button text.



**Figure 7-1: Prototype for apply now section**

### **Test: Events Section Usability**

Scenario: A current UWB student heard about an event that will be held at UWB next week, but forgot what day and time it is at, and wants to learn more about the event.

Tested:

- Time to find an event
- Opinions on which was better (current vs prototype)

Observations:

- Mixed results for preferences for current version vs prototype.
- Current version event info was missing location information.
- Current version “all events” link hard to notice.
- Participants felt calendar gave a lot more information.
  - Some found it overwhelming.
  - Others found it necessary.
- Participants noted that it took longer to find a specific event.



# Bothell Campus Calendar

 First Year Programs	 Seminar
 Workshop	 Club Meeting
 Info Session	 Conference

March 2019



M	T	W	T	F	S	S
25	26	27	28	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Wednesday, Mar. 20, 2019

Time	Event	Location
	Accessibility 101 Online Training	
 1 p.m.	CANCELED - CANCELED! Creating a Respectful Environment for All Employees	UW Bothell UW1
 6 p.m.	STEM Electrical Engineering Graduate Programs Information Session	Discovery Hall

Figure 8-1: Prototype for events section

## VII.II Secondary Research

### Website accessibility standards

Description:

It's important that the website should be available to everyone who want to use it, including those with disabilities. A good design for accessibility should remove barriers that prevent interaction with, or access to the website. After all, if users cannot access functionalities of the website, is it really usable?

Researching the standards and guidelines for web accessibility was important to understand how a website should be designed to comply with these standards. Based on various sources that have been written by organizations the following should be incorporated to ensure some accessibility:

- Consistent layout and structure
- Descriptive text alternatives for images
- Skip links; to allow user to jump pass large blocks of content and links (e.g. navigation menus)
- Link awareness; to notify if a link opens differently than normal
- Links with unique and descriptive name
- Use color to distinguish and organize content
- Video and audio captions and transcripts

## **User Behavior Tracking**

Description:

User behavior tracking provides a unique perspective on website analytics by allowing site owners to view not only where users go on a specific web page, but also how they interact with the elements on the page. For example, do users open the various panels of a navigation menu because they can't find what they're looking for?

Pros:

- It shows the most important and relevant information on the webpage.
- It can capture design flaws, such as users trying to interact with a noninteractive object.
- It represents and visualizes the true user journey.

Cons:

- It shows the most important and relevant information on the webpage.
- It can capture design flaws, such as users trying to interact with a noninteractive object.
- It represents and visualizes the true user journey.

Recommendations:

- It's important to let users know you are collecting their browsing data on the website with some sort of little message and the option to opt out.
- Conduct tests to confirm that the user browsing tracking software is not lagging the webpage or negatively impacting the user's experience on the site.

## **Site Marketing Principles**

Description:

From a marketing perspective, we wanted to ensure that the site maximizes its efficiency in attracting interest to apply from students. Being our #1 marketing tool, it's essential that our site is as effective as possible.

Results:

Of all the insights I discovered, I found the most significant of all was differentiation. I believe UWB has a lot of arguments it could make for differentiating itself and this is a key selling point for prospective students. The current home page has no apparent reference to the great benefits of UWB such as small class sizes, the availability of a variety of majors, the diversity, and the quality of education. These need to be emphasized when a user enters the site.

Adding onto this, first impressions are critical in marketing. When a prospective student visits the site, they needed to be quickly greeted by meaningful information that will encourage their decision to pursue UWB and why they should choose our school over others.

Another important principle is simplicity. Simplicity is essential because you do not want to overcomplicate your website and fill it with information that will overwhelm the user. This is a critical practice to avoid users leaving the site early due to frustration. A great workaround for this is to enable roles for different personas such as prospective student, current student, and parents. This allows the website to still provide the depth of content needed while preserving simplicity for each type of user.

The ultimate conclusion from this research is: show the target user what you can provide, keep things simple, and make a great first impression. In today's world, our attention spans are decreasing so every second a user is on a site is extremely valuable, further justifying the need to conduct extensive research to maximize the efficiency of a site.

### **How does more text vs less text effect a user's impression of the website?**

Description:

More texts allows more useful links to be displayed on the page. Less text allows finding the links to be far easier and quicker and reduces the need to scan the page for long periods of time.

Results:

Less is constantly the better approach than more when concerning web design. A cluttered website takes a long time for the user to find what they need since there is just so much on the page to digest. A minimalistic web page with less text allows users to find the main goal(s) of the website faster and more comfortably navigate the website. *Read more* links are extremely useful because they help compress text and clean up a page while also giving statistics and which articles were read the most.

Uwb.edu does this fairly well, the homepage employs not too much text, and all the articles give a short snippet of the article and a *read more* link. However, some of the deeper-in pages and menus do have a large amount of text and links which add time to a user's task since he will have to scan the page for longer looking for the right link. A solution would be to design the mobile

app/ site first, since working with a small screen forces designers to keep content to an absolute minimal, which makes the website cleaner on mobile and on desktop.

### **How does button color/size/position affect users' use of the website?**

Description:

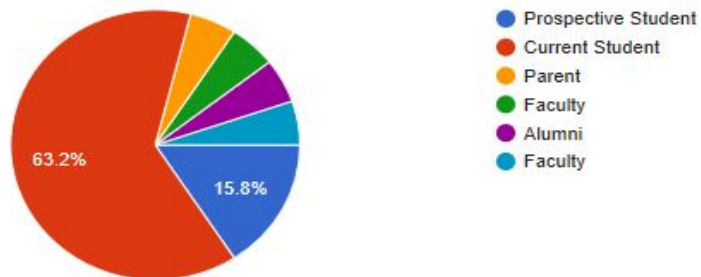
Buttons are used throughout the UWB website. Buttons are a vital component of any website when it comes to the usability with a website, because they are usually used to do actions that the user wants to do. Studying the best practices for buttons was important to understand how to correctly use buttons on the UWB page. Based on many resources that were written by experts in UI/UX, the following rules should be applied for buttons:

- Put buttons where users expect to find them.
- Label buttons with what they do.
- Buttons should be at a minimum 10mm X 10mm.
- Button background should have visual weight and contrast from its surroundings.
- Button with rounded corners enhances information processing and draws eyes to the center of the button.
- Buttons should be consistent across the whole page.
- Buttons should be dynamic e.g. change color when hovering over the button, provide visual feedback on-click

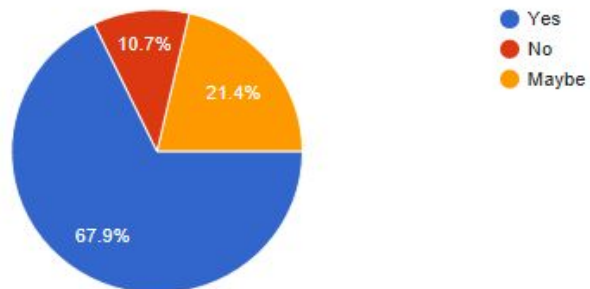
### VII.III Questionnaire

#### UWB Website Questionnaire

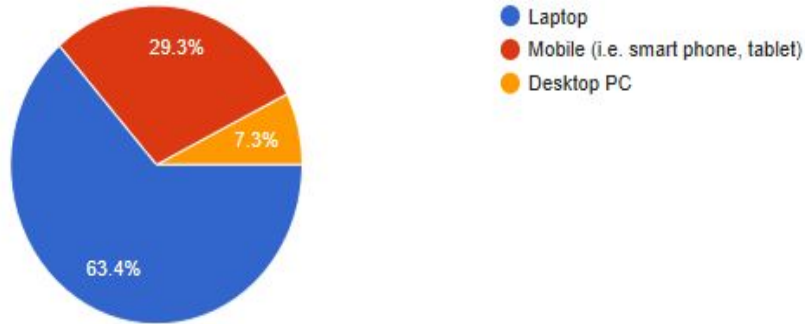
Are you a ?



If UW Bothell had a mobile app would you download it?



Which type of device do you use the most to access the UWB website ?



**Full Questionnaire Link :**

[https://docs.google.com/forms/d/e/1FAIpQLSfPZO2K3UHJ-LJXD6VarUnE3FlRDbnIYbP7HCj4Ownr7-UQhw/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSfPZO2K3UHJ-LJXD6VarUnE3FlRDbnIYbP7HCj4Ownr7-UQhw/viewform?usp=sf_link)

Based on the questionnaire data, the following results were found:

- Laptops and mobile device are used the most to access the uwb.edu website
- A majority of users would download a UWB app if one existed
- The major chunk of users are current students and prospective students

With this data, we decided to focus on matters that would affect current and prospective students.

#### VII.IV Issue Prioritization

Table 1.1: Business Value importance/priority.

Priority	Priority Value	Attribute
Critical	4	Size of links & font too small on navigation menu, impairment of usability
High	3	Site needs responsiveness capabilities
High	3	Website organization: some links are currently located in places where one does not naturally look for useful links.
High	3	Large amount of links in the drop-down menu, difficult to navigate



High	3	Remove links that are currently not useful (e.g husky jobs)
High	3	“Apply now” button background color almost blends into background, making it easy to miss.
High	3	Display value of UWB over other schools on homepage - can use fast facts
High	3	Broad menu option for mobile display
Medium	2	Future student will not be able to find application info easily
Medium	2	Apply info is not obvious <i>Apply for Admission</i> and <i>Student Resources</i> boxes not easily found
Medium	2	“Apply now” button does not actually take you to the application for UWB.
Medium	2	“Apply now” button not different for transfer and first-year students.
Medium	2	“All Events” text-link small, and easy to miss. Font style is not bolded. Font color blends in with normal text.
Medium	2	Events section only lists a few upcoming events. Limited only to events happening soon.
Medium	2	Events do not have location information related to the event.
Medium	2	Bring more visibility to fast facts page, can include link to page on the homepage
Medium	2	Ensure homepage presents a strong first impression for the users, this can be the difference between them applying or not
Medium	2	Cluttered layout of items in menu distracting for the sensory sensitive
Low	1	Event “type” not defined for the various events.

Low	1	Apply section does not contain deadline for application, and other potentially useful information.
Low	1	Rotating UWB news bar, to show multiple news stories, visual enhancement
Low	1	UWB site is not as modern or captivating as the websites of competitors'

## VIII. Conclusion

The user experience of the University of Washington Bothell website needs improvement. Fortunately, many of the design suggestions are small changes that provide a very large impact to the primary users. Such changes include adjusting the locations of buttons and links, and formatting font of the menus, admissions sections, events and more. The website will look cleaner, less cluttered, and easier to read. These changes will provide faster navigation of the site which will in turn improve the user experience. The university will likely see an increase not only in user satisfaction but also in the likelihood of prospective students applying to the University of Washington Bothell since they are more likely to find the information they are looking for. This is important since prospective students apply on many other university websites, and are more likely to want to attend a school that doesn't have a frustrating and confusing website.