

Examining the Usability of the University of Hawaii at Manoa's Office of the Registrar Website

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Abstract: The rapid evolution of technology has increased the demand for universities to provide easily accessible information to students, alumni, faculty, and staff through various means of communication. One such mean is the university website that serves as the virtual face of the institution as well as an important resource for all users. At the University of Hawaii at Manoa, current and previous students heavily rely on the Office of the Registrar's website to obtain accessible information regarding important documents such as transcripts, diplomas, graduation requirements, personal information changes, and more. Anecdotal feedback gained from frustrated customers included the lack of information, difficulty navigating the website, outdated aesthetic features, and more. As such, the purpose of this usability study was to analyze the navigational efficiency, organizational content, and user satisfaction for UH Manoa's Office of the Registrar website. Based on feedback it appeared users favored aesthetically appealing webpages that incorporated eye-catching pictures and graphics, simplified information, menu bars, easily accessible links, and downloadable forms. Changes were made to the original website to address these preferences in order to improve the website as a whole.

Original Module Website for 1st Round: <http://justinla.wix.com/records>

Adjusted Module URL for 2nd Round: <http://justinla.wix.com/registrars-office>

Introduction

Due to increasing demands for technology integration in society, universities are expected to develop a well-organized, easily navigable, and aesthetically appealing website to optimize user experience and keep its constituents well informed. As mentioned in *The Community College Website as Virtual Advisor*, websites can serve as a low-cost resource to provide accurate information that can enhance student's knowledge of college (Margolin et al., 2013). As such, one of the most critical challenges is developing a website to simultaneously attract and serve current students, faculty, staff, and alumni effectively. The University of Hawaii is no exception. Anecdotal feedback gained from working at the University's Office of the Registrar include complaints of the website being too text heavy, not incorporating enough usable content, and the inability of web browsers to find pertinent information that should be easily accessible. The

development of a successful university website must take into consideration the needs of the users and the information they seek rather than solely rely on the developer's perspective. Doing so will help simplify websites by incorporating only necessary information that users will need, thus increasing user satisfaction (Bringula & Basa, 2011). In addition, there are other motivational factors that have shown to influence one's acceptance of a website to increase user satisfaction. These factors, specified by the United Theory of Acceptance and Use of Technology, include performance and effort expectancy, social influence, behavioral intention, facilitating conditions, and user behavior. As such, web developers in higher education benefit by studying their target audience to incorporate components into the website that relate to users, thus increasing performance and effort expectancy as well as social influence (Van Schaik, 2009). These efforts made by developers will subsequently improve user experience as a whole.

To eliminate frustration it is also critical for universities to grow with current technological trends by providing an aesthetically pleasing, well organized, and easy to navigate website. The purpose of this usability study was to analyze navigational efficiency, organization of content, and user satisfaction for the University of Hawaii at Manoa's Office of the Registrar website that provides information and services (focusing on transcripts, diplomas, enrollment, and student data updates) for current and previous students.

Working at the Office of the Registrar has exposed me to the frustration expressed by current and former students in regards to the Office of the Registrar's website. From conversations with unsatisfied individuals, I have realized that many of their needs could have easily been met by adding necessary information and forms accessible on the website, creating a more user-friendly layout to increase satisfaction, and minimizing jargon to foster better navigation. These experiences sparked my interest to develop a solution to the office's confusing website. Designing a more effective website will ease the irritation of current users and in turn decrease the volume of unnecessary phone calls for staff members of the Office of the Registrar. On a daily basis, many staff members spend a substantial amount of their time providing guidance on issues which are currently addressed on the website. This usability study has allowed me to gain insight into the specific needs of users through a series of surveys, recorded scenario questions, and observations. The data gathered and analyzed throughout this study pinpointed major needs of current users along with defined specific problems of the Office of the Registrar's website. The redesign of this website addressed these issues and provided a more user-friendly interface.

Background and Literature Review

Usability is defined as the capability of a technology to be easily and effectively used by users to perform a wide range of tasks for specific purposes (Mentes & Turan, 2012). When conducting a usability study, individuals are observed as they navigate through a particular website to determine the functionality and navigational ease of the interface. After all, the primary function of websites is to provide users with the necessary

information they require to achieve specific goals with effectiveness, efficiency, and satisfaction (Kincl & Strach, 2012).

When conducting a usability study to improve websites, there are several important components to consider in terms of content, design, and navigation of the interface. Content should be clear, concise, and written in appropriate language for all users to understand. To generate interest, web design should be kept consistent and the interface should be formatted such that navigation is simple, intuitive, and minimizes the need for additional searches and scrolling (Nikolova-Houston, 2005). Although not all ideas will be successful at first try, it is important to know that usability studies are works in progress that require multiple tests to reach the desired results (Reynolds, 2008).

Through first-hand interactions, users of the current Office of the Registrar website suggested that the redesign of the website is critical in resolving issues of unusable content, lack of navigational efficiency, and the need for more usable links and information. Websites are great resources to allow users to access information at the touch of their fingertips. As such, it is crucial to ensure that web links to important materials or forms are available and easy to find (McMillen & Pehrsson, 2009). In addition to creating easy navigational links, the new website attempted to resolve these issues by simplifying the organization of content on various student services web pages, adding additional eye appealing graphics/pictures, incorporating necessary information for users, and eliminating unnecessary text heavy content. In the study titled *Study of the Usability of University Registrar's Office Website*, it was determined that minor changes in redesigning drop down menus and web banners increased user experience exponentially (Tuzun et al., 2013). This is especially true for a university website that is so frequently used by students in higher education such as the Registrar's Office website.

Visual design components of a website are significant to consider when designing a user-friendly, eye appealing, and successful web interface. Studies have shown that elements of background contrast, screen layout, color palette, and grouped items all can have a positive effect on usability (Foley, 2011). Additional elements such as pictures and graphics can also influence a product's appearance. Aesthetically appealing products have proven to spark intrigue and curiosity amongst users, thus increasing user motivation and performance when using the product (Sauer & Sonderegger, 2011). However, the emphasis should not be placed solely on the aesthetic features of a website, as excessive or inappropriate graphic designs may become distracting for users (Loh & Williams, 2002). Rather, the combination of content, presentation, and overall impression of a website will play an integral role in user satisfaction (Kincl & Strach, 2012).

Another factor that should be considered when updating the Registrar's Office website is its compatibility with devices such as smartphones, tablets, PDAs, and other portable devices that have the ability to connect to the Internet. According to *Big numbers and small screens: Challenges and opportunities of the mobile web for national statistical offices*, the popularity of mobile technology that allows for convenient connectivity to the web has increased exponentially since 2007 (Mair, 2009). Therefore, it will be beneficial

for developers to understand web formats on mobile device platforms to extend to a greater number of viewers on various devices.

Project Design & Development

Due to the inability to modify and make changes in real-time to the existing Office of the Registrar website, a beta website that mirrored the original Office of the Registrar's website was created and can be found at <http://justinla.wix.com/records>. Selection of Wix was due to previous experiences using the program, as it provides numerous customizable tools, has an easy interface, offers a wide variety of web templates to choose from, and incorporates the option to create effective mobile device and desktop interfaces for its websites.

The intent of implementing changes to the Office of the Registrar website was to increase user satisfaction, foster better navigation, and organize web content more effectively. The updated website, with all of its revisions, updates, and improvements can be found at <http://justinla.wix.com/registrars-office>.

A variety of changes were made to the Office of the Registrar website with the intent to increase user satisfaction. One such change was the incorporation of a new background. As compared to the plain and outdated background of the original website (see Figure 1), the updated background incorporated aspects such as the University of Hawaii at Manoa's green color as well as some texture to make the website more aesthetically pleasing (see Figure 2).

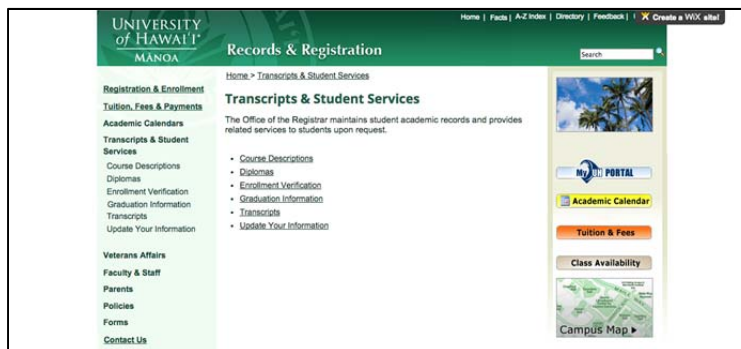


Figure 1: Transcript and Student Services web page with original background.



Figure 2: Transcript and Student Services web page with new background.

Another addition that pleased users were the specifications of documents needed to make a name, citizenship, or social security number change. The original website simply specified “contact the Office of the Registrar to inform the University of a change of name, citizenship, or Social Security Number” (see Figure 3). However, the lack of information frustrated users. As such, the website was modified to indicate which specific documents were needed in order to make the appropriate updates to student records (see Figure 4).



Figure 3: Original instructions to update student name, citizenship, and social security number.

<p>Name Change: Submit the following official documents to the Office of the Registrar:</p> <ul style="list-style-type: none"> • Marriage Certificate, • Divorce Decree, OR • Certificate of Naturalization <p>AND</p> <ul style="list-style-type: none"> • Request for Change of Name, Citizenship, or SSN Form (PDF) • Government Issued Photo ID Card <p>The Office of the Registrar does not accept copies of these documents.</p>	<p>Citizenship Change: Submit the following official documents to the Office of the Registrar:</p> <ul style="list-style-type: none"> • Certificate of Naturalization OR • U.S. Passport <p>AND</p> <ul style="list-style-type: none"> • Request for Change of Name, Citizenship, or SSN Form (PDF) <p>The Office of the Registrar does not accept copies of these documents.</p>	<p>SSN Change: Submit the following official documents to the Office of the Registrar:</p> <ul style="list-style-type: none"> • SSN Card • Government Issued Photo ID Card <p>AND</p> <ul style="list-style-type: none"> • Request for Change of Name, Citizenship, or SSN Form (PDF) <p>The Office of the Registrar does not accept copies of these documents.</p>
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Figure 4: Updated instructions to update student name, citizenship, and social security number.

Lastly, new links to form fillable PDFs were integrated into the website to optimize user satisfaction. As shown in Figure 5, PDF forms such as the Diploma Request Form, Hawaiian Diploma Form, and Replacement Diploma Form were created so users can obtain the necessary information independently. These small, yet crucial changes helped shape the Office of the Registrar website into a university web resource where users can easily navigate and independently access information with minimal frustration.

• Diploma Request Form (PDF)	• Hawaiian Diploma Form (PDF)	• Replacement Diploma Form (PDF)

Figure 5: Various diploma PDF forms.

Numerous revisions were also made to the Office of the Registrar website to foster navigational efficiency. The website's pre-existing menu bars (see Figure 6 for an example) were each reformatted so web topics would be more distinguishable. These changes were implemented because the original menu buttons were in plain text, thus making them frequently overlooked by users. Therefore, distinct pictures and buttons were added to reformat menu bars for aesthetic and navigational consistency (see Figure 7 for an example).

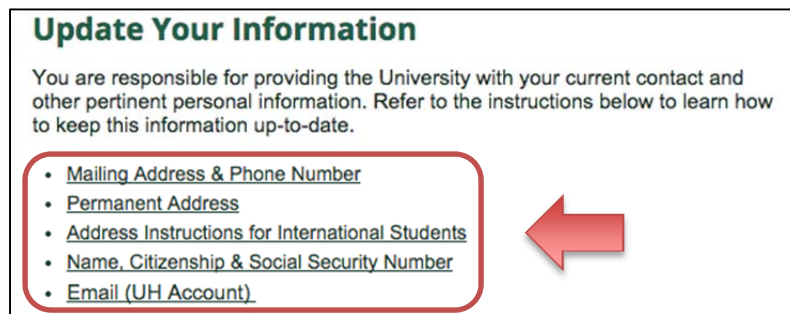


Figure 6: Example of original menu bar.



Figure 7: Example of updated menu bar.

In addition, links to PDF forms were modified to help users locate information more quickly. Original links such as the Request for Verification of Enrollment Form (see Figure 8) were hidden within text-heavy paragraphs with little to no noticeable components. However, revised links such as that in Figure 9 were made larger, thus allowing users to simultaneously locate links and preview the PDF form with ease.

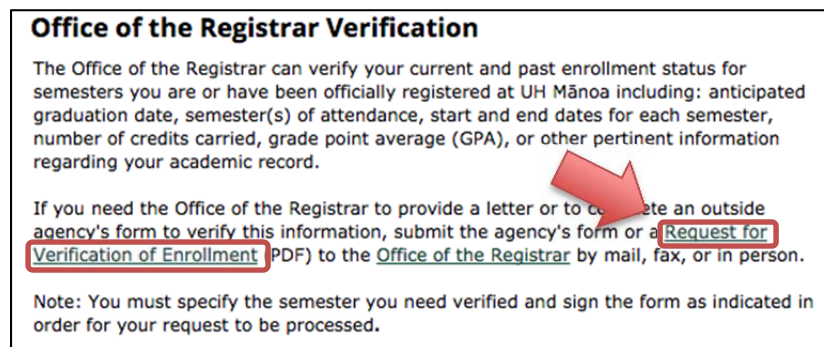



Figure 8: Hidden PDF link to Request for Verification of Enrollment Form.

Office of the Registrar Verification

Enrollment verifications are used to verify that you are currently or were previously enrolled at the UH Mānoa. To request for such a document, please submit the [Request for Verification of Enrollment Form](#) to the [Office of the Registrar](#) by mail, fax, or in person.



REQUEST FOR VERIFICATION OF ENROLLMENT

University of Hawaii at Mānoa
Office of Registrar & Records
Office of Registrar & Records
1505 W. Mānoa Ave., Room 401
Honolulu, HI 96825 Fax: (808) 955-1516

STUDENT INFORMATION - Required to identify your record (Please Print)

Name: _____ (Last, First Middle) _____ (Current or email) _____ (University)

I Would Like to Verify Enrollment For:

Current semester (Current semester)

Past semester (Past semester - will be provided only if you have officially registered for classes.)

Past enrollment: Attendance from _____ (Semester & Year) to _____ (Semester & Year)

Information to Provide:

Enrollment Status: Full time, half time, or less than half time (provided for current or next semester only)

Anticipated Date of Graduation: _____ (Indicated on form application for degree)

Other: _____

Sending Instructions:

I would like to PICK UP my Verification of Enrollment (to pick up, you must present a valid photo ID)

FAX TO: _____ U.S. fax numbers only. Some organizations may not accept faxes!

SEND Verification of Enrollment to: _____

• [Request for Verification of Enrollment Form \(PDF\)](#)

Information that can be verified include the following:

- anticipated graduation date
- semester(s) of attendance
- start and end dates for each semester
- number of credits carried
- grade point average (GPA)
- degree(s) awarded
- or other pertinent information regarding your academic record

Figure 9: More distinguishable PDF link to Request for Verification of Enrollment Form.

Another major change was the incorporation of pictures to the Transcript and Student Services web page. As shown in Figure 10, the original web page was also in plain text and offered minimal aesthetic components. Therefore, the modified Transcript and Student Services web page assimilated a variety of pictures that appealed to visual learners (see Figure 11). It should be noted that each picture on the web page corresponded directly with the topic of the web page (e.g., Diploma web page had a picture of a student holding a diploma). As such, this helped ease navigation and allowed users to find information more efficiently. Revised links coupled with a more noticeable menu bar and additional pictures helped users locate information more effectively, thus improving the navigational efficiency of the website.

Transcripts & Student Services

The Office of the Registrar maintains student academic records and provides related services to students upon request.

- [Course Descriptions](#)
- [Diplomas](#)
- [Enrollment Verification](#)
- [Graduation Information](#)
- [Transcripts](#)
- [Update Your Information](#)

Figure 10: Original Transcript and Student Services web page.

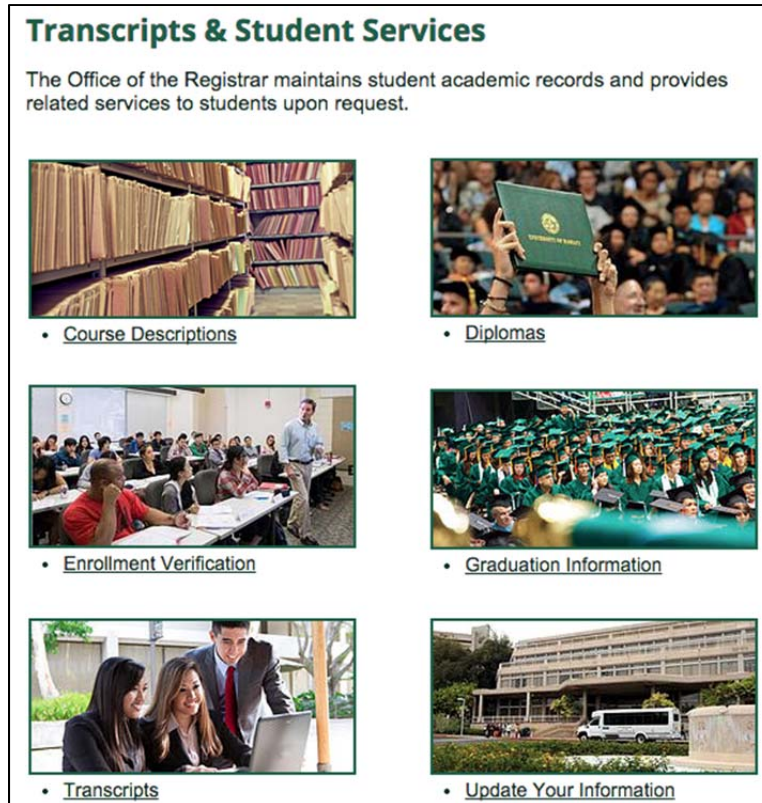


Figure 11: Updated Transcript and Student Services web page.

The organizational layout of the original Office of the Registrar website was another component that was addressed when improving the website. Various components such as the office's contact information (i.e., office address, contact numbers, email address, hours of operation, etc.) were specified on all web pages (see Figure 12 for example). Doing so allowed users to view the contact information consistently throughout the website. Other additional features added to the website included a Google Map of the office's location so customers could locate the office without asking for directions, as well as an embedded form within Office of the Registrar website which allowed users to compose an email to the office without having to open a new web browser or internet tab to access their individual email accounts. See Figure 13 for examples of the office's Google Map and embedded email form.

Lastly, some information was reformatted in an attempt to organize the website while simultaneously making it more user-friendly. An example was when the original Office of the Registrar website specified methods to submit transcript orders (see Figure 15). Although all information was indicated, it could easily be missed. So, the information was reformatted using graphics to differentiate the information more noticeably (see Figure 16). The combination of these changes aided in the development of a new and improved Office of the Registrar website that appeased customers on issues regarding its organizational layout.

Graduation Information

Table of Contents

- Apply for Your Degree
- Degree Application Deadlines
- Change Your Graduation Date
- Commencement

You are eligible to graduate once you have completed your college or school and major requirements. In order to participate in Commencement, the official graduation ceremony, you must apply for your degree and register for [Commencement](#).

Apply for Your Degree

To apply for your degree, take the following steps:

1. Meet with your advisor to do a degree check and to ensure that you have met all requirements and are qualified to graduate.
2. File a degree application with your college or school's [Advising office](#) the semester before you intend to graduate.
3. Log into MyUH to pay diploma fee.

Contact Us
 University of Hawaii at Manoa
 Office of the Registrar
 2600 Campus Road, QLC 010
 Honolulu, HI 96822
 808-956-8010 (General)
 808-956-5562 (Transcripts)
 808-956-7830 (Fax)
 uhmanoa.records@hawaii.edu

Figure 12: Contact information on each webpage.

Contact Us
 University of Hawaii at Manoa
 Office of the Registrar
 2600 Campus Road, QLC 010
 Honolulu, HI 96822
 808-956-8010 (General)
 808-956-5562 (Transcripts)
 808-956-7830 (Fax)
 uhmanoa.records@hawaii.edu
 8:00 am - 4:00 pm (Mon - Fri)

Figure 13: Google Map and embedded email form on the office's Contact Us webpage.

Mail to:
Office of the Registrar

Fax to:
 808-956-7830
 Fees payable by Visa or MasterCard only
 Please call 808-956-5562 to verify your request has been received

In Person:
 For cash or check payments go to:
 UH Mānoa Cashier's Office
 QLC, Room 105
 Monday–Friday, 8:30 a.m.–3:30 p.m.

Figure 15: Original transcript ordering options.



Figure 16: Updated transcript ordering options.

Conclusion

Several lessons and “ah ha” moments become apparent after conducting this usability study. First, it was important to keep the target population at the forefront of my mind. Updates to this website were made with the audience’s perspective in mind rather than my own because the goal was not to develop a well-designed and user-friendly product for myself, but instead for the individuals who would use the website on a regular basis. Secondly, I have learned that small changes in web design can have a substantial impact for users. An example was the minor change in background color from white to green that instantly made the website more aesthetically pleasing to users. Third was not to get too attached with the existing web design because changes were inevitable. Sometimes, development adjustments that took hours to make would be undone because of an unforeseen flaw. However, numerous modifications and updates needed to occur to get the desired results. As the saying goes, “sometimes you have to tear things down to build things up.” Finally, was understanding that everyone’s opinion is valuable. A usability process is a collaborative effort that requires suggestions from various parties. As such, I have learned not to overlook individual inputs just because it didn’t make sense to me. After all, these were the very individuals who provided me with an alternative perspective that appealed to a more diverse group of individuals. One such suggestion was to match pictures with the topic on the Transcript and Student Services webpage. This allowed visual learners to navigate and locate information more effectively while simultaneously improving the website by featuring a more cohesive look.

This usability study helped develop a well organized and aesthetically appealing website for UH Manoa’s Office of the Registrar that increased user satisfaction, optimized user experience, and allowed individuals to independently access information with greater ease. Another benefit gained from this usability study included reducing the number of phone calls received by the Office of the Registrar, thus allowing the employees at the Office of the Registrar to work more efficiently. By enhancing this website, I am optimistically hoping that other University of Hawaii at Manoa departments will soon follow in order to improve and enhance user web experiences to promote the University as a whole

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