Usability Study of a Student-Centered Career Resource Website for Faculty and Staff

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Abstract: What do you want to be when you grow up? That ten-word question resonates in the mind of a child. It is asked by an influencer such as a parent, coach, friend, mentor, and educator. More often than not University of Hawai‘i Maui College (UHMC) campus support services and course instructors are approached by students unsure of their major or future career choice. It is okay to be uncertain, but time and money are considered significant costs associated with these types of ambiguities. The internet provides an abundance of career-related tools and resources, yet lacks streamlined access, campus-specific essentials, and cultural components. The purpose of this usability study was to evaluate a website of self-assessment tools and career-related resources for UHMC faculty and staff who actively assist students in career exploration, planning, and decision-making. Principles of instructional design and multimedia learning were incorporated during the website design and implementation process. Following rounds one and two of usability testing, revisions were made to the prototype based on participant feedback. Adjustments contributed to decreased response times for eight of ten total tasks completed during round three. Overall responses indicate positive user experience including the application of the website as a resource tool.

Statement of the Problem

Faculty and staff at the University of Hawai‘i Maui College (UHMC) are confronted with the challenges students face of college life and careers. Studies suggest that students have specific occupational and career interests as early as the eighth grade (Tracey, Robbins, & Hofsess, 2005). Over time interests may change with experiences. Students attend college to obtain a degree and expand skills sought by employers, all the while relying profoundly on their interest when deciding what courses to take or major to pursue.

A career committee team at UHMC was formed to assist student career preparation and exploration further. Committee members are faculty and staff from diverse academic and professional backgrounds. The existing system used for communication and resource information sharing includes, but are not limited to the following: Google Drive, email, and bi-monthly meetings. It is essential for professionals in higher education not only understand challenges that students face but develop and implement strategies to help students accomplish types of milestones (Fouad, Ghosh, Chang, Figueiredo, Bachhuber, 2016). A resource website for faculty and staff was created to help streamline access to career-related resources and material while infusing technology-based training and
development. Therefore, the purpose of this usability study was to evaluate a website of self-assessment tools and career-related resources for UHMC faculty and staff who actively assist students in career exploration, planning, and decision-making.

Literature Review

There are a plethora of website resources available to educators interested in student career preparation and exploration. The researcher of this study is exposed to various stages of career exploration from the perspective of educator and graduate student. The need existed for an internal design of a simplified faculty and staff career training and resource website. The comprehensive site was developed to allow participants to easily access, share, and collaborate with a direct correlation to the institution’s goals, environment, and cultural characteristics. To progress in this rapid social, economic and technological times, Zuber-Skerritt, (2016) recommends the need for higher education to develop alternative approaches, theories and methodologies, social technologies and strategies to develop, train and prepare staff.

Career Exploration Planning. Researchers agree that interests develop primarily as a result of experience. By investigating behavioral and adaptive components of career exploration and planning, Fouad et al., (2016) suggest the need to structure major and career planning courses that promote the development and implementation of behaviors that increase students’ engagement of occupational exploration, career decision-making, skills, and instrumentation. UHMC students are provided the opportunity to participate in First Year Experience (FYE), a core focus of the program is career exploration. These types of initiatives such as educating first-year college students around career development should involve multiple stakeholders (Stebleton & Diamond, 2018).

It is no surprise that there is a connection to educators having a positive influence on the educational and career ambitions of students. The following principles have been modified to address specific needs for post-secondary education career exploration, ACT College Readiness (2005):

1. Begin early in a student’s collegiate career by talking to students about their academic and career interests.
2. Help students think about the connections between academic coursework and future career.
3. Spend time reviewing students’ interest inventory results.
4. Promote creative and informed career exploration through the use of structured programs or activities.
5. Incorporate technology-based learning and training for students, faculty, and staff.
Technology and Professional Development. According to Umbach & Wawrzynski, (2005), recruiting and training of faculty committed to activities will create a collegiate environment that will have a dramatic impact on student learning. With the increased use of technological applications in education, infusing technology into recruitment strategies can generate faculty and staff interest. The incorporation of virtual reality (VR) and augmented reality (AR) based training and resources can create a sense of immersion of oneself into a particular place or thing through the lenses of student and industry. An example of VR and AR technology use is remote site visits for program and internship coordinators. Providing training opportunity using video chat (Skype, Zoom, Hangout) allows adaptive convenience.

Usability Testing. The field of usability has matured significantly in both the academic world and product development practice (van Kuijik, Christiaans, Kanis & van Eijk, 2007). A study completed by Johnson, Salvo, & Zotewey (2007) highlights usability was not a term commonly used over 50 years ago, but making things more usable and more useful was already prevalent among those in the technical and professional communication sectors. That trend continues today as evident in the increased use of the internet. Usability testing is an essential element to producing and maintaining consistent computer-based training and learning.

Accessibility. Web accessibility is one of the most neglected and significant aspects of modern web development. According to Ng (2017), accessibility guidelines and best practices need to be integrated into regular content lifecycle to provide a user experience that allows people to achieve their goals. Creating a website with bells and whistles can be aesthetically pleasing but can result in disrupting user-friendliness for learners with disabilities.

Methodology

Research Questions. This usability study sought to answer the following research questions.

1. Are the learners able to use the website efficiently and easily to complete basic and complex tasks while navigating within and between site modules?
2. How are the tools and resources provided to learners able to further assist student career exploration?

To help answer the research questions the usability study took into consideration Rubin, J., Chisnell, D., & Spool, J., (2011) regards to the testing approach of different objectives, as well as different time and resource requirements.

Content Analysis. Members of UHMC career committee and subject matter experts assisted in identifying resources and information for the website that would help faculty and staff contribute to student career exploration. Styles and strategies used to engage learner participation comprise of relevant videos, graphics, text, links, and resources. A wireframe of the intended website was created using wireframe.cc (see Appendix A).
This study incorporated two domains of learning that encouraged participation, feedback, and sustained use. In the cognitive area, study participants displayed intellectual skills that contributed to task completion. Basic skills included prior computer use with a familiarity of keyboard and mouse functions and knowledge of accessing and navigating specific areas of a website, such as a homepage. Participants followed directions, stored and recalled information, connected new information to prior knowledge, applied learned information to student career exploration and decision-making, and were observed possessing a range of technological skills.

Participant characteristics in the affective domain exhibited enthusiasm for continued professional development, an awareness that environmental and cultural aspects influence interest and consciousness that there is value to career tools and resources for faculty and staff use. Participants were motivated to share and collaborate among peers asserting a student-driven focus and displayed passion for student successes beyond academia.

Participants. The target audience for this study was current and prospective UHMC faculty, staff, and career committee members who closely work with students in various roles and functions ranging from support services such as counseling, lecturing, degree planning, computing & technology, and career services. Recruitment was conducted via email and in person (see Appendix B). Text messaging confirming time and location was used to communicate with third-round participants, due to testing modifications. Participant demographics include age, computer proficiency, internet confidence, internet access type, and internet activity (see Appendix C).

Evaluation Instruments. Quantitative pre and post surveys were distributed using Google Forms (see Appendices D-E). The pre-survey incorporated demographic questions, the post-survey focused on user experience characteristics using the Likert-scale, while the usability protocol severity of problems was rated using Molich, Jeffries and Dumas (2007) recommended rating scale. As an additional component, the average task completion time was selected as the method to gather and deliver results. The strategy identifying the slowest and fastest task time with determining the minimum and range in seconds was supported by the recommendation of Sauro (2011). The usability protocol consisted of one pre-task, seven tasks, and two supplemental tasks: identifying what the website is about, navigating the homepage, locating webpages and subpages, and finding information within subpages (see Appendix F). Qualitative data was collected during and at the end of testing through participants verbal reaction and response (see Appendix G).

Project Design Strategies. The website was built using Google Sites. The researcher was familiar with Google Classic Sites but chose to use the new Google Sites. In keeping with Google-themed programs for functionality and familiarity, Google products were used for the recruitment email (Gmail), pre and post-surveys (Forms), recording software ( Screencastify), and web browser (Chrome). Integration of Mayer’s Cognitive Theory of Multimedia Learning (Mayer, 2005) helped with the design process.

The new Google Sites offered limited font and theme options. A solid colored banner was used to highlight page titles. Each webpage and subpage incorporated a brief introduction
to page content that included external links to direct and non-direct resources. With no specific navigation hierarchy, the design aimed to allow participants to browse by instructional and self-directed methods. Due to option limitations, non-Google products Disqus a worldwide blog comment hosting service and Tockify website calendar were incorporated into the design (see Appendix H). Basic established accessibility standards were implemented using alt-text, minimum graphics, and a simplified layout to assist with user-friendliness and accessibility.

The original website homepage design was positioned as a full cover header with six webpages: exploration resources, self-assessment tools, glossary, professional development, discussion board, and forms & templates (see Appendix I). The exploration resources subpage included nine subpages: resume & cover letter, internship, job search strategies, effective networking, skills & qualities, interview strategies, social media etiquette, employment statistics, and mentorship. The side navigation menu was complimented with identical puzzle shaped static icons accessed by clicking the arrow at the bottom of the cover image or by scrolling method. Dark gray was used for page introduction backgrounds (see Appendix J).

First-round participants navigated the website using the side navigation menu; however, two did not realize there existed a second option on the homepage to access webpages and subpages. Feedback from round one prompted revisions by switching to a top navigation bar, updating the homepage cover image to banner size, removing the form & template page, and adding an about page. The mentorship subpage was removed, and the professional development page layout was modified by relocating the calendar of activities. Page introduction background was adjusted from dark gray to a lighter option.

During round two testing, issues continued to exist regarding scrolling options on the home and professional development pages — revisions after the second group of testing included updates to webpage introductions, professional development page layout, and homepage image size (see Appendix K). Adjustments to the website contributed to improved navigation task times and increased user experience with round three participants. The usability study outcome is located in the results section and corresponding appendices. To view the site visit https://sites.google.com/view/uhmccareerexplore/home.

Procedures. Before participant recruitment and usability testing, the researcher completed the CITI Program courses and submitted the required information and documentation to the University of Hawai‘i Institutional Review Board (IRB) eProtocol (See Appendix L). Recruitment and testing commenced once the approved IRB was received. Two separate rounds of testing with each session comprising of three participants used Krugs (2005) facilitator script as part of the observation protocol. An IRB modification was submitted to implement a third round of testing with sessions completed upon approval. The project timeline was revised to reflect the incorporation of round three (see Appendix M). All test sessions were conducted in a UHMC room during a time agreed upon by participant and researcher. Participants were provided a copy of the consent form (see Appendix N). Once a favorable acknowledgment of the terms was received, testing started with the
researcher providing a brief introduction to the purpose of the usability study and information about general testing procedures.

Participants were encouraged to think out loud while progressing through the ten tasks. Data indicated that the longest participant task completion section of the session was 10 minutes, while the shortest was recorded at 2 minutes 58 seconds. At the end of each testing, a brief question and answer followed, contributing to qualitative data collected. The post-survey was emailed to participants after each session with responses to the user experience of the design layout, navigation, ease of use, effectiveness, and participation.

The researcher compared session notes and screen recordings to identify needed improvements to the website. Revisions were made between and after iterations based on rounds one, two, and three severity ratings and user experience feedback. The data gathered and collected from participation was used solely for this usability study and electronically filed and secured on a password protected computer. Once the research and data analysis was completed, video and audio records were destroyed.

**Results**

Round 1 Usability Task. Tasks completion times were completed under 10 seconds and rated no issues for the pre-task, task 1 thru 4, and task 7. There were two serious ratings for task 5 with one recorded at 144 seconds, which resulted in the longest individual task completion time of all three rounds of testing. The researcher observed the delay stemmed from not knowing whether to continue browsing through the pop-up window following task 4 and not realizing to return to the homepage or self-assessment page to complete task 5. Task 6 was seen to have one minor and one serious issue, with its lengthiest time of 34 seconds. The researcher opted not to revise the design, recognizing the additional time needed to locate a subpage. Task 8 incurred the most problems with three serious ratings, the shortest completion at 39 seconds and the longest at 121 seconds. During task 8, participants were observed first navigating to the self-assessment webpage rather than the professional development page. This observance prompted the researcher to update the task direction before the next round by including “and” between assessment and certification. For task 9, there was one minor rating at 11 seconds and one serious at 28 seconds.

Table 1 represents first-round individual and average task completion scores and rating. The shortest average task time for round one was task 4 at 1.3 seconds and rated no issue. Task 8 was recorded with the longest average completion time at 72 seconds, rated serious.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task Time Individual and Average: Round 1</strong></td>
</tr>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>
Pre Task: Figure out by browsing through the homepage what the website is about
Task 1: Locate information about different types of self-assessments tools
Task 2: Locate information about career exploration resources
Task 3: Click on self-assessment tools
Task 4: Access information about the STRONG Interest Inventory assessment
Task 5: Find further information about MBTI assessment result readings
Task 6: Access internship information
Task 7: Find information about the difference between an internship and volunteering
Task 8: Find information about obtaining or remaining current in assessment certification
Task 9: Where to go to share ideas and obtain feedback from colleagues

**Round 1 User Experience.** Following first-round testing, the researcher analyzed 51 participant user experience responses. Table 2 provides detail of round one’s individual and section averages. Feedback indicated satisfaction ratings for design layout at 4.95 and effectiveness at 4.8. Navigation received the lowest average satisfaction rating of 4.26. Ease of use and study participation resulted in average scores of 5.0. Average satisfaction rating for round one was 4.80.

**Round 1 Revisions.** Initial revisions to the website occurred following first-round testing and user feedback. The homepage navigation menu experienced the most significant updates with the relocation of the navigation menu. The homepage header image was changed from cover to large banner size allowing users the ability to notice the second option to access webpages. Font size and colors were revised. As previously mentioned, the forms & template page was deleted and replaced with an about page. The mentor subpage was removed. Minor editing such as adding conjunctions was done to the observation protocol to provide a more precise understanding of intended tasks.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Average (Avg.)</th>
<th>Standard Deviation (S.D.)</th>
<th>Section Average (Sec. Avg.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Layout</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website is visually appealing</td>
<td>5</td>
<td>0</td>
<td>4.95</td>
</tr>
<tr>
<td>Text is clearly written</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Images are interesting and relatable to topic</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Organization of information is clear</td>
<td>4.67</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td><strong>Navigation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main Navigation is easily identifiable</td>
<td>4.33</td>
<td>0.58</td>
<td>4.26</td>
</tr>
<tr>
<td>Navigation labels are clear and concise</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Number of buttons/links are reasonable</td>
<td>4.33</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Links are consistent and easy to identify</td>
<td>4.67</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Site search is easy to access</td>
<td>4</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Ease of Use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website is user-friendly</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Website has a clean and simple presentation</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
### Effectiveness

<table>
<thead>
<tr>
<th>Information on the website is useful</th>
<th>5</th>
<th>0</th>
<th>4.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easy to find information on the web</td>
<td>4.67</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>I felt comfortable navigating website</td>
<td>5</td>
<td>0</td>
<td></td>
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<td>I would use information on the website in my class/workshop/one-on-one sessions</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Website is effective in providing instructions strategies to learner with disabilities</td>
<td>4.33</td>
<td>1.15</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and guidelines for participating in the usability testing were clear</td>
</tr>
</tbody>
</table>

1= strongly disagree; 2= somewhat disagree, 3= somewhat agree; 4= agree, 5= strongly agree

### Round 2 Usability Task

The pre-task and task 1 thru 5 were observed with completed times of under 10 seconds and rated no issues. Task 6 was seen with one minor rating at 14 seconds and one serious rating at 21 seconds. Locating the corresponding subpage contributed to the delays. Task 7 was rated with two no issues and one serious rating at 25 seconds. Observation indicated that difficulties identifying individual sections caused the delay. Task 8 was completed with two no issue ratings and one serious rating at 17 seconds. No revisions were made. There were two no issue ratings for task 9 and one serious rating at 32 seconds, which was recorded as round two’s lengthiest time. The delay was due to the uncertainty of which page to visit. No changes were made. Task 1 and 2 were observed with the shortest average task times, each at 1 second. The longest average time was task 6 at 13.3 seconds.

Table 3 represents individual and average task completion scores and ratings for second-round testing and includes round 1 average results. In comparison to round one, round two was observed with a decrease in average times except for task 7, which data indicated an increase of 7.3 seconds.

### Table 3

**Task Time Individual and Average: Round 2**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre Task</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Task 5</th>
<th>Task 6</th>
<th>Task 7</th>
<th>Task 8</th>
<th>Task 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>14*</td>
<td>1</td>
<td>17*</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>32**</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>21**</td>
<td>25**</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Average</td>
<td>2.6</td>
<td>1</td>
<td>1</td>
<td>1.3</td>
<td>2.4</td>
<td>4.3</td>
<td>13.3*</td>
<td>9</td>
<td>8</td>
<td>12*</td>
</tr>
</tbody>
</table>

**Average Rnd 1**

7 1.6 2 2.6 1.3 64** 17.6* 2.3 72** 13.3*

*Minor: Delayed user briefly.

** Serious: Delayed user significantly but eventually allowed user to complete task.

*** Catastrophic: Prevented user from completing their task.

### Round 2 User Experience

Table 4 describes round two user experience individual and section response averages. Data analysis indicated section average satisfaction ratings for design layout at 4.75, effectiveness at 4.53, ease of use at 4.66, and study participation at 4.67. Effectiveness received the lowest average user satisfaction rating of 4.26. Navigation was the only user experience recorded with an increase in satisfaction in
contrast to round-one section averages. Round two experienced the lowest average user satisfaction of the usability study at 4.57.

**Round 2 Revisions.** Homepage navigation issues persisted with participants not realizing there existed a second option to access individual pages. A second revision to the homepage image was made by switching from large to regular banner size. A horizontal line separating the internship subpage topics was added before the next round. Page introductions and the professional development page layout were revised.

**Table 4**

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<td>5</td>
</tr>
<tr>
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<td>0</td>
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<td>1</td>
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<td>4.67 (↑)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

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(↑): overall increase, (↓): overall decrease

**Round 3 Usability Task.** The final round of testing was observed with the pre-task, task 1 thru 3, task 5, and task 7 thru 9 rated no issues with completion times under 10 seconds. Task 4 was seen with one minor rating at 19 seconds. No revisions were necessary as the task was completed shortly after requesting the researcher to reread the task. Task 6 was recorded with one minor rating at 14 seconds and one serious rating at 26 seconds which was the longest completion time for round three. Navigating to the corresponding
subpage contributed to the delays as noted in rounds one and two. Task 1 thru 3, task 5, and task 8 were observed with the shortest average times at 1 second. Task 6 noted the longest average time at 14 seconds.

Table 5 explains the third-round individual and section average task completion times and includes round 1 and 2 average results. In correlation to round one and two average times, round three times resulted in navigation time reductions except for tasks 4. In contrast to round one, task 6 was observed with a decrease of 3.6 seconds and an increase of 0.7 seconds from round two results.

### Table 5

<table>
<thead>
<tr>
<th>Task Time Individual and Average: Round 3</th>
<th>Participant</th>
<th>Pre Task</th>
<th>Task 1</th>
<th>Task 2</th>
<th>Task 3</th>
<th>Task 4</th>
<th>Task 5</th>
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</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>19*</td>
<td>1</td>
<td>26**</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>14*</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>2.3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>1</td>
<td>14*</td>
<td>2</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Average Rnd 1</td>
<td>7</td>
<td>1.6</td>
<td>2</td>
<td>2.6</td>
<td>1.3</td>
<td>64**</td>
<td>17.6*</td>
<td>2.3</td>
<td>72**</td>
<td>13.3*</td>
<td></td>
</tr>
<tr>
<td>Average Rnd 2</td>
<td>2.6</td>
<td>1</td>
<td>1.3</td>
<td>2.4</td>
<td>4.3</td>
<td>13.3*</td>
<td>9</td>
<td>8</td>
<td>12*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Minor: Delayed user briefly.
** Serious: Delayed user significantly but eventually allowed user to complete task.
*** Catastrophic: Prevented user from completing their task.

### Round 3 User Experience

Table 6 illustrates round three user experience results. Examination of the data showed section average satisfaction ratings for the design layout at 4.75, navigation at 4.93, ease of use at 5.00, effectiveness at 5.0, and the lowest section average, study participation at 4.66.

Third round feedback resulted in an overall positive user experience of the design layout and ease of use. There was an increase in satisfaction for navigation and effectiveness and decrease in satisfaction for study participation, in comparison to round one and two. Round three presented the highest average user satisfaction of the usability testing at 4.86.

### Table 6

<table>
<thead>
<tr>
<th>Post Survey User Experience: Round 3</th>
<th>Characteristics</th>
<th>Average</th>
<th>S.D.</th>
<th>Sec. Avg. Rnd 1</th>
<th>Sec. Avg. Rnd 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Layout</strong></td>
<td>Website is visually appealing</td>
<td>4.66</td>
<td>0.47</td>
<td>4.75 (↓)</td>
<td>4.95</td>
</tr>
<tr>
<td></td>
<td>Text is clearly written</td>
<td>4.66</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Images are interesting and relatable to topic</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organization of information is clear</td>
<td>4.66</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Navigation</strong></td>
<td>Main Navigation is easily identifiable</td>
<td>5</td>
<td>0</td>
<td>4.93 (↑)</td>
<td>4.26</td>
</tr>
<tr>
<td></td>
<td>Navigation labels are clear and concise</td>
<td>5</td>
<td>0</td>
<td></td>
<td>4.53</td>
</tr>
</tbody>
</table>
### Ease of Use

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of buttons/links are reasonable</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Links are consistent and easy to identify</td>
<td>4.66</td>
<td>0.47</td>
</tr>
<tr>
<td>Site search is easy to access</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Website is user-friendly</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Website has a clean and simple presentation</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

### Effectiveness

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information on the website is useful</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>It is easy to find information on the web</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>I felt comfortable navigating website</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>I would use information on the website in my class/workshop/one-on-one sessions</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Website is effective in providing instructions strategies to learner with disabilities</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

### Study Participation

<table>
<thead>
<tr>
<th>Item</th>
<th>Rating</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructions and guidelines for participating in the usability testing were clear</td>
<td>4.66</td>
<td>0.47</td>
</tr>
</tbody>
</table>

1 = strongly disagree; 2 = somewhat disagree, 3 = somewhat agree; 4 = agree, 5 = strongly agree

(=↓): identical to previous round, decrease from highest score, (↑)=: increase from previous round, identical to other round, (↑): overall increase, (↓): overall decrease

#### Overall Usability Task

Results in Figure 1 defines the usability study overall average severity of problems for the ten tasks completed by nine participants. The pre-task thru task 3 was rated no issues. Task 4 and 8 experienced minor issues. Task 5 and 7 incurred serious ratings. Task 9 indicated both minor and serious results. Task 6 sustained the most problems with six participants reporting task completion difficulties.

![Participant Severity Rating](image)

**Figure 1.** Participant severity of problems rating scale results.
The usability study overall average task completion times and variance for rounds one, two and three are depicted in Figure 2. Task 8 sustained the longest average task completion time of 27 seconds. Results showed task 1 with the shortest completion time of 1.22 seconds. Task five averaged the most significant variance at 44.4 seconds.

**Figure 2. Task Completion Time: Average Rounds 1, 2, & 3**

**Overall User Experience.** Details for overall usability results are specified in Figure 3. The highest satisfaction rating of 4.88 occurred with ease of use, and the lowest with navigation rated at 4.57.

See Appendix O for charts and figures that display additional collected data and results.

**Figure 3. Post survey user experience: average rounds 1, 2, & 3.**
Discussion

Lessons Learned. The slight adjustments to usability protocol task phrasing suggest the importance of checking for understanding before testing. In comparison to other web builders, the new Google Sites offered insufficient options to expand creativity. Furthermore, the researcher believes there is an opportunity to merge the content of the site to the existing UHMC website platform WordPress or provide a link on its faculty and staff webpage. The usability of the website was tested on desktop and laptop computers. Future testing could assess using mobile devices.

Conclusion. With research today suggesting that experience and interest contribute considerably to student career exploration, the impact generates increased relatability to educators having a positive influence on the educational and career ambitions of students. Data gathered during this usability study provided the researcher answers to the two research questions. First, are the learners able to use the website efficiently and easily to complete basic and complex tasks while navigating within and between site modules? Interaction and results revealed that participants completed the fundamental and complex tasks at different severity rating intervals. The second, how are the tools and resources provided to learners able to further assist student career exploration? Participants displayed interest and appreciation for the website — they showed enthusiasm for student-centered faculty and staff career-related professional development and passion for supporting students during and beyond college life.

The implications of the usability study suggest future development of this website will be beneficial to its target audience and visitors. It has the potential to grow into the go-to resource tool for UHMC faculty and staff who desire to participate in student career exploration while infusing technology-based training and development with campus essentials and cultural components.
References


Appendix A

WIREFRAME

Wireframe Homepage 1

Wireframe Webpage/Subpage
Aloha ParticipantName!

My name is Hōkū Hobbs and I am a graduate student at the University of Hawai‘i at Mānoa in the College of Education. I am conducting a usability study for my Master’s degree in Learning Design and Technology research project.

The focus of my study is the ease of use of a resource website for faculty and staff interested in career resources and tools geared to assist students in their own career exploration and decision-making. In the study, I will be asking faculty and staff to participate by completing several short tasks using the website. I will also ask questions about navigating the website, the layout, usefulness, the user experience and ease of use. The approximate time of each session is 30-45 minutes.

As a member of the UH Maui College team, I would like to invite you to participate in the study. The usability study session will take place in Ka Lama Building Room 206A or remotely. All information will be kept strictly confidential. A report of the study will be available to career committee members, faculty and staff at the completion of the project. By participating in this research project your role as a committee member, faculty or staff status will not be impacted.

If you are interested in participating, please fill out this pre-survey: click here

For more information or if you have additional questions, feel free to contact me directly at hhobbs@hawaii.edu.

Mahalo,
Hōkū
Appendix C

PARTICIPANT DEMOGRAPHICS

**Age**

- 18-29: 22%
- 30-39: 45%
- 40-49: 22%
- 50 and above: 11%

**UHMC Association**

- 0-12 months: 22%
- 2-5 years: 33%
- 6-10 years: 45%
- More than 10 years: 0%
USABILITY STUDY OF A CAREER RESOURCE WEBSITE

Internet Access Type

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desktop/Laptop</td>
<td>100</td>
</tr>
<tr>
<td>Mobile: Tablet, iPad</td>
<td>100</td>
</tr>
</tbody>
</table>

Internet Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping</td>
<td>77.8</td>
</tr>
<tr>
<td>News</td>
<td>44.4</td>
</tr>
<tr>
<td>Work</td>
<td>100</td>
</tr>
<tr>
<td>Social Media</td>
<td>55.6</td>
</tr>
<tr>
<td>Research</td>
<td>66.7</td>
</tr>
<tr>
<td>Entertainment</td>
<td>44.4</td>
</tr>
<tr>
<td>Email</td>
<td>100</td>
</tr>
<tr>
<td>Other</td>
<td>100</td>
</tr>
</tbody>
</table>
Appendix D

PRE SURVEY

The purpose of this pre-survey is to gather preliminary data in preparation for the usability study of a resource website of self-assessment tools and career related resources for UH Maui College faculty and staff who actively assists students in career exploration, planning and decision-making.

This ten question pre-survey will take approximately 5 minutes or less to complete. To help protect your confidentiality, this survey will not contain information that will personally identify you. The results of this survey will be used for purposes of my final research project at the University of Hawai‘i at Mānoa Learning Design and Technology (LTEC) 690 course.

Mahalo for your participation!

1. I identify as
   a) Male
   b) Female
   c) Rather not say or Other

2. Age
   a) 18-29
   b) 30-39
   c) 40-49
   d) 50 and above

3. What is your position/Role at UHMC campus:____________

4. How long have you been associated with UH Maui College?
   a) 0-12 months
   b) 2-5 years
   c) 6-10 years
   f) More than 10 years

5. How would you rate your proficiency using computers?
   a) Novice
   b) Advanced beginner
   c) Competent
   d) Proficient
   e) Expert

6. How would you rate your level of confidence using the internet.
   a) Novice
   b) Advanced beginner
   c) Competent
   d) Proficient
   e) Expert
7. How often do you use the internet on a daily basis?  
a) I do not use the internet  
b) Less than 4 hours  
c) 4-7 hours  
d) 8-11 hours  
e) 12 or more hours

8. How do you usually access the internet?  
a) Desktop/Laptop Computer  
b) Mobile: Tablet, iPad, Smartphone  
c) Other:__________

9. What do you do on the internet?  
(Check all that apply)  
a) Shopping  
b) News  
c) Work  
d) Social Media  
e) Research  
f) Entertainment  
g) Email  
h) Other:____________

10. What location do you usually access the internet?  
a) Home  
b) Work  
c) Other: _______________
Appendix E

POST SURVEY

Mahalo for your participation in the usability study. Please complete this post survey. Your participation is voluntary.

The purpose of this post survey is to further measure your experience and provide insight to the website and what worked well and what needs to be fixed.

This 18 question post survey will take approximately 10 minutes or less to complete. To help protect your confidentiality, this survey will not contain information that will personally identify you. The results of this survey will be used for purposes of my final research project at the University of Hawai‘i at Mānoa Learning Design and Technology (LTEC) 690 course.

Mahalo again for your participation!

1-Strongly Disagree  2-Somewhat Disagree  3-Somewhat Agree 4- Agree 5-Strongly Agree

<table>
<thead>
<tr>
<th>Design Layout</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Website is visually appealing</td>
</tr>
<tr>
<td>2. Text is clearly written</td>
</tr>
<tr>
<td>3. Images are interesting and relatable to topics</td>
</tr>
<tr>
<td>4. Organization of information is clear</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Navigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Main navigation is easily identifiable</td>
</tr>
<tr>
<td>2. Navigation labels are clear and concise</td>
</tr>
<tr>
<td>3. Number of buttons/links are reasonable</td>
</tr>
<tr>
<td>4. Links are consistent and easy to identify</td>
</tr>
<tr>
<td>5. Site search is easy to access</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ease of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Website is user-friendly</td>
</tr>
<tr>
<td>2. Website has a clean and simple presentation</td>
</tr>
</tbody>
</table>
**Effectiveness**
1. Information on the website is useful
2. It is easy to find information on the website
3. I felt comfortable navigating the website
4. I would use information on the website in my classes/workshops/one-on-one sessions
5. Website is effective in providing instructional strategies to learners with disabilities

**Participation**
1. Instructions and guidelines for participating in the usability testing were clear
Aloha [Participant Name]. My name is Hōkū, and I’m going to be walking you through this session today.

Before we begin, I have some information for you, and I’m going to read it to make sure that I cover everything.

The purpose of my project is to evaluate a resource website of self-assessment tools and career related resources for UHMC faculty and staff who actively assists students in career exploration, planning and decision-making.

I would like to see if it works as intended. The session should take about 30-45 minutes.

The first thing I want to make clear right away is that I am testing the site, not you. You can’t do anything wrong here. In fact, this is probably the one place today where you don’t have to worry about making mistakes.

As you use the site, I’m going to ask you as much as possible to try to think out loud: to say what you’re looking at, what you’re trying to do, and what you’re thinking. This will be a big help to me.

Also, please don’t worry that you’re going to hurt my feelings. I am doing this to improve the site, so I need to hear your honest reactions.

If you have any questions as we go along, just ask them. I may not be able to answer them right away, since I’m interested in how people do when they don’t have someone who can help. But if you still have any questions when I’m done I’ll try to answer them.

And if you need to take a break at any point, just let me know. Do you have any questions so far?

Okay, lets begin.

**Research Question 1:** Is the learner able to use the website efficiently and easily to complete basic and complex tasks while navigating within and between site modules?

<table>
<thead>
<tr>
<th>Pre Task: Can you figure out by browsing through the homepage what the website is about?</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Task completed: Yes / No</td>
</tr>
<tr>
<td>b. Task completion in seconds________</td>
</tr>
</tbody>
</table>

---

_____Minor: Delayed user briefly.

_____Serious: Delayed user significantly but eventually allowed user to complete task.

_____Catastrophic: Prevented user from completing their task.
**Task 1:** (Now that we have established what this site is about) You’re trying to locate information about different types of self-assessments tools, where would you first click to find this answer?

Just point to where you would click, but stay on the homepage for now and don’t actually click the link.

- Task completed: Yes / No
- Task completion in seconds________

- Minor: Delayed user briefly.
- Serious: Delayed user significantly but eventually allowed user to complete task.
- Catastrophic: Prevented user from completing their task.

**Task 2:** Next, you’re trying to locate information about career exploration resources, where would you click to find this answer?

Just point to where you would click, but stay on the homepage for now and don’t actually click the link.

- Task completed: Yes / No
- Task completion in seconds________

- Minor: Delayed user briefly.
- Serious: Delayed user significantly but eventually allowed user to complete task.
- Catastrophic: Prevented user from completing their task.

**Task 3:** Now that you have located both we will focus on each of those pages individually.

Looking at the homepage menu, click on self-assessment tools.

- Task completed: Yes / No
- Task completion in seconds________

- Minor: Delayed user briefly.
- Serious: Delayed user significantly but eventually allowed user to complete task.
- Catastrophic: Prevented user from completing their task.
### Task 4: Next access information about the STRONG Interest Inventory assessment. Can you find it?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Task completed: Yes / No</td>
</tr>
<tr>
<td>b.</td>
<td>Task completion in seconds__________</td>
</tr>
</tbody>
</table>

_____Minor: Delayed user briefly.  
_____Serious: Delayed user significantly but eventually allowed user to complete task.  
_____Catastrophic: Prevented user from completing their task.

### Task 5: A student recently completed their MBTI assessment. You are preparing for a one-on-one consultation that will help the student understand their result. Where would you go to find further information about MBTI assessment result readings?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Task completed: Yes / No</td>
</tr>
<tr>
<td>b.</td>
<td>Task completion in seconds__________</td>
</tr>
</tbody>
</table>

_____Minor: Delayed user briefly.  
_____Serious: Delayed user significantly but eventually allowed user to complete task.  
_____Catastrophic: Prevented user from completing their task.

### Research Question 2: How are the tools and resources provided to the learner, able to further assist student career exploration?

### Task 6: You are preparing to share with students’ about internships, you want to learn more about its importance and value. Walk me through on how to access internship information?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Task completed: Yes / No</td>
</tr>
<tr>
<td>b.</td>
<td>Task completion in seconds__________</td>
</tr>
</tbody>
</table>

_____Minor: Delayed user briefly.  
_____Serious: Delayed user significantly but eventually allowed user to complete task.  
_____Catastrophic: Prevented user from completing their task.

### Task 7: A student asks, “what is the difference between an internship and volunteering?” Find the information about the difference?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Task completed: Yes / No</td>
</tr>
<tr>
<td>b.</td>
<td>Task completion in seconds__________</td>
</tr>
</tbody>
</table>

_____Minor: Delayed user briefly.  
_____Serious: Delayed user significantly but eventually allowed user to complete task.  
_____Catastrophic: Prevented user from completing their task.
### Supplementary Task

**Task 8:** You want to learn about obtaining or remaining current in assessments and certifications. Where would you go to find the information?

a. Task completed: Yes / No  
b. Task completion in seconds________

<table>
<thead>
<tr>
<th></th>
<th>Minor: Delayed user briefly.</th>
<th>Serious: Delayed user significantly but eventually allowed user to complete task.</th>
<th>Catastrophic: Prevented user from completing their task.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Task 9:** You have a question or want to share an idea related to student career exploration, tools and resources. Where can you go to share your ideas and obtain feedback from colleagues?

a. Task completed: Yes / No  
b. Task completion in seconds________

<table>
<thead>
<tr>
<th></th>
<th>Minor: Delayed user briefly.</th>
<th>Serious: Delayed user significantly but eventually allowed user to complete task.</th>
<th>Catastrophic: Prevented user from completing their task.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUALITATIVE DATA VERBAL REACTION AND RESPONSE

- attractive
- simple
- user-friendly
Appendix H

THIRD PARTY APPS: DISQUS AND TOCKIFY

Utilize this discussion board to generate conversation, ask questions and share ideas. The intent is to continue to build resources and ideas UHM College faculty and staff can use to assist student career exploration.

To add or join the discussion board log in to your Disqus account. If you do not have a current account you can sign up at https://disqus.com/

■ Once logged in you will be prompted to select between two options, click the option “I want to comment on sites”

*Featured below is a calendar of events (workshops, conferences, training, etc.)

Made with the new Google Sites, an effortless way to create beautiful sites.
Appendix I

INITIAL HOMEPAGE: COVER IMAGE AND PUZZLED ICONS
INITIAL HOMEPAGE: SIDE NAVIGATION AND GRAY COLOR
Appendix K

REVISED HOMEPAGE AND WEBPAGES
USABILITY STUDY OF A CAREER RESOURCE WEBSITE

Exploration Resources

Did you know career exploration experiences and opportunities can improve academic performance? It improves and expands students’ knowledge of options by encouraging students to develop and work toward goals during important stages in their lives.

Career exploration is an essential tool for a new and returning college student. It is especially helpful early in a student’s academic career to map out course and career trajectory to meet the desired goals. The steps big or small can help guide students in making positive, well-informed educational and career decisions. Education plays a pivotal role in student career exploration. The resources below may better assist in helping students in their quest.

Resume & Cover Letter

Internship

Job Search Strategies

Effective Networking

Skills &

Interview

Social Media

Employment

Internship

What Is an Internship?

An internship is a professional learning experience that offers meaningful, practical work related to a student’s field of study or career interest. It gives students the opportunity for career exploration and development, and to learn new skills. It offers the employer the opportunity to bring new ideas and energy into the workplace, develop talent and potentially build a pipeline for future full-time employees.

Dependent on the employer, location, etc., internships can be paid or unpaid. There is increasing support that grades cannot measure work ethics. A majority of employers now favor internship experience over GPA.

What is considered a quality internship:
- Consists of a part-time or full-time work schedule that includes no more than 25% clerical or administrative duties.
- Provides a clear job/project description for the work experience.
- Orients the student to the organization, its culture and proposed work assignment(s).
- Helps the student develop and achieve learning goals.
- Offers regular feedback to the student intern.
Choosing a career can be a daunting task. There are many resources out there that can aid in the decision process. Utilizing a self-assessment tool is a way to move beyond hindrances, with findings that can help students think about personal preferences and career interests. Assessments vary in length, focus area and cost. Educators can guide students to participate in available assessments, but ultimately it is a student’s personal preference to determine which one is most fitting to their current needs and career goals.

The STRONG Interest Inventory® and Myers-Briggs® self-assessment tools are currently used at UH Maui College in first-year cohort classes, special interest programs, class workshops and individual student consultation.

Featured below are four types of self-assessment tools.

**Strong Interest Inventory® (SII)**

The Strong Interest Inventory® assessment provides robust insight into a person’s interests, so you can help them to consider potential careers, their educational path and the world of work.
Interested in any of the following certifications and information about national organizations?

Click the links below to view more information. As you visit these external websites, take the time to navigate available resources.

- Myers Briggs MBTI
- STRONG Interest Inventory
- True Colors
- National Career Development Association
- National Association of Colleges and Employers
- Association for Career and Technical Education
- National Cooperative and Intercollegiate Association

*Featured below is a calendar of events (workshops, conferences, training, etc.)*

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More often than not, campus support services and course instructors are visited by students not sure of their major or future career choice. It is also common that faculty and staff are the go-to support for students who have questions about academic goals and career interest. For students, it is okay to be uncertain, but time and money are a significant cost associated with uncertainties. There exist valuable tools and resources beneficial to educators that can assist students in career exploration and planning. This website is designed as a student-centered faculty and staff career resource website.
Appendix L

CITI PROGRAM CERTIFICATES

This is to certify that:

Hoku Hobbs

Has completed the following CITI Program course:

- Information Privacy Security (IPS)
- Exempt Researchers and Key Personnel (IPS 1 - Basic Course)

Under requirements set by:

University of Hawaii

Verify at www.citiprogram.org/verify?wa54fc6c4-b4ef-436c-a0ec-0a2c5f689c9-28101747

This is to certify that:

Hoku Hobbs

Has completed the following CITI Program course:

- Human Subjects Research (HSR)
- Exempt Researchers and Key Personnel (Course Learner Group) (Stage)

Under requirements set by:

University of Hawaii

## ESTIMATED PROJECT TIMELINE

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestone</th>
</tr>
</thead>
</table>
| Sep-Oct 2018 | - Start on paper prototype and website wireframe  
               - Information gathering  
               - Ocular reconnaissance/SME input  
               - Review web design guidelines/multimedia design principles  
               - Start creating website on New Google Sites |
| Sep-Nov 2018 | - Develop usability plan  
               - Purpose, goals, objectives, research questions  
               - Context  
               - Data Gathering Collection instruments – consent, questionnaires, interview  
               - Usability Protocol, tasks/scenarios  
               - Data Analysis  
               - Conclusion |
| Dec 2018    | - Data collection instruments finalized  
               - Conduct usability test of website beta version with critical friends  
               - Analyze usability test results and modify rapid prototype as needed |
| Jan 2019    | - Conduct 1st usability test  
               - Analyze usability test results and modify rapid prototype as needed |
| Feb 2019    | - Conduct 2nd usability test  
               - Analyze usability test results and make final website revisions  
               - Draft Project Plan Complete |
| Mar 2019    | - Conduct 3rd usability test  
               - Final Project Plan Complete  
               - Develop TCC Conference presentation and report |
| April 2019  | - Present at TCC                                    |
| May 2019    | - Complete and submit final report paper           |
INFORMED CONSENT

Aloha! My name is Hōkū Hobbs and I am a graduate student at the University of Hawai‘i (UH) at Mānoa in the College of Education, Learning Design and Technology (LTEC) program. I am doing a research project as part of the requirements for earning my graduate degree.

The purpose of my project is to evaluate a resource website of self-assessment tools and career related resources for UHMC faculty and staff who actively assists students in career exploration, planning and decision-making.

Participation will be in person using Google Screencastify or remotely using Google Hangout On Air. If you opt to participate in person, a computer will be provided for your use. Online participation requires a computer, internet connection, audio and video capability. If you participate, you will be asked to navigate through the career resource website while being prompted by a series of scenario questions and tasks. The questions are intended to evaluate the ease of use and user satisfaction of the website. You will be encouraged to share your thoughts out loud as you navigate the website, which will assist me in gaining further insights into the user experience. Your actions and verbal comments will be screen captured and recorded using Google Hangouts on Air and Google Screencastify.

Once all scenarios are completed, you may be asked follow up questions as needed. You will be asked to complete a post survey intended to gather feedback pertaining to the design layout, navigation, ease of use and effectiveness of the website as a whole. The entire usability study, including surveys, will last about 30-45 minutes.

Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. Your choice to participate or not participate will not affect your rights to services at UH Maui College.

The data taken from your participation will be used solely for the purpose of this usability study. I will keep all study data secured on a password protected computer. Only my University of Hawai‘i advisor and I will have access to the information.

Once the research is complete, all recordings will be destroyed. Research completion date is set for April 30, 2019. When I report the results of my research project, I will not use your name. I will not use any other personal identifying information that can identify you. I will report my findings in a way that protects your privacy and confidentiality to the
If you have any questions about this study, please call or email me at 808.XXX.XXX & hhobbs@hawaii.edu. You may also contact my professor, Dr. Curtis Ho at curtis@hawaii.edu or 808.XXX.XXX. You may contact the UH Human Studies Program at 808.XXX.XXX or uhirb@hawaii.edu. to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit http://go.hawaii.edu/jRd for more information on your rights as a research participant.

Permission to Participate in Usability of a Career Resource Website

“I certify that I have read and that I understand the information in this consent form that I have been given satisfactory answers to my questions concerning the project and that I have been told that I am free to withdraw my consent and to discontinue participation in the project at any time without any negative consequences to me.

I herewith give my consent to participate in this research project with the understanding that such consent does not waive any of my legal rights.”

With your permission, I will audio-record the scenario portion of this study so that I can later transcribe and analyze the verbal responses. If you opt to participate remotely, I will also video-record during the scenario portion of this study so that I can analyze the reaction movements.

Please initial next to either “Yes” or “No” to the following:
I consent to be audio recorded during the scenario portion of this research.

_____ Yes _____ No

I consent to be video recorded during the scenario portion of this research.

_____ Yes _____ No

___________________________                              ____________________________
Printed Name of Participant                                       Signature of Participant

______________________
Date

___________________________                              ____________________________
Signature of the Person Obtaining Consent                          Date
Appendix O

TASK COMPLETION TIME: PARTICIPANTS ROUNDS 1, 2, & 3

Task Time: Round 1

Task Time: Round 2
Table 7

**Task Time: Comparison of completion rounds 1, 2, and 3**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Task Time: Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Task 1</td>
</tr>
<tr>
<td>1-3</td>
<td>4,8, 9</td>
</tr>
<tr>
<td>4-6</td>
<td>3,1, 4</td>
</tr>
<tr>
<td>7-9</td>
<td>1,5, 1</td>
</tr>
</tbody>
</table>

*Note:* Values represent completion in seconds.

Highlighted represents decreased response times for round three in comparison to rounds 1-2.

*Minor: Delayed user briefly.

**Serious: Delayed user significantly but eventually allowed user to complete task.

***Catastrophic: Prevented user from completing their task.