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Proposal

The following proposal contains redesign changes for the site "my.ucla.edu", we recognize that MyUCLA is a live system and have therefore reduced the scope to functions and tasks that can be performed by undergraduate students of UCLA. First, we will begin by introducing each non-trivial tasks and more importantly the issues that were revealed by actual users as they tried to perform the tasks. This information was gathered during our process of user testing following the walkthrough usability guidelines, and for a full detailed description of the tasks performed, user experience, and user feedback refer to the usability evaluation report attached to the index below. We will follow-up each description of the issues with our proposed redesign changes for usability improvement based on the feedback we received. Each redesign improvement was carefully evaluated and discussed to ensure it followed guidelines that would actually benefit the users of MyUCLA.

As the first task, we had users begin on the home page and attempt to find the informational page for a Muslim organization on campus. The users were overwhelmed and confused due to the numerous paths available on the site. Users also expressed that they were uncertain in their choices as they traversed through links trying to complete the task. The uncertainty in the user's choices was due to similarity in options. One link was labeled as "groups" while another was labeled as "student organizations", although one may be more specific than the other; a user who first spots the "groups" link would not be acting unreasonably in thinking it could help them solve this task.

Our proposed redesign solution for MyUCLA is the integration of a search engine accessible from any page on the site. Although we did not actually implement the search engine, the design implementation is shown below in figure 1. The inclusion of a search bar would allow users to bypass having to tediously navigate down the hierarchy of ambiguous links, so the lookup process for our task would boil down to a single step of typing into the search bar. Having a search bar may also allow more secluded locations of the site to be visited more frequently. Another benefit to adding a search function would be the valuable data that could be collected and used to learn which site features are most popular and either create them if non-existant or promote them by placing them more prominently on the site.

Our users were shown the search bar redesign and were in agreement that a search function would be a far superior alternative to having to walk-through the site to find their resources manually. A user expressed discontent because he had not realized that a search bar was missing from MyUCLA, and expressed that there should be alternatives for new users who are not familiar with the site. Another user was skeptical about the reliability and accuracy of the search engine to actually find what they are looking for given their disappointment with the currently existing site and they stated, "It would probably be better to just google it".
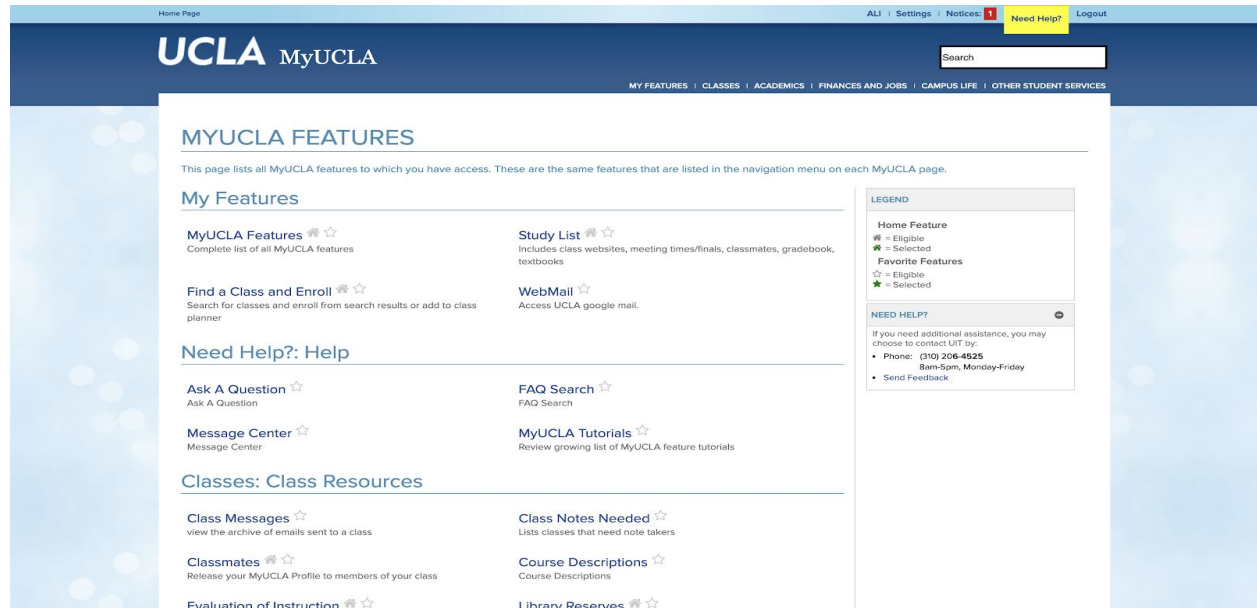
Figure 1. This redesign shows a search bar on the upper-right-corner of MyUCLA. The search bar would be accessible on every page within the website so that the user can always search for desired link.

In user interface design we have learned that every click matters, and it is common practice for drop-down menu bar to display their content when a user simply hovers over an option. This feature is missing from MyUCLA, users must click on a top-menu option to see the additional links below. This overhead on users could easily be avoided by making the additional features visible when users hover over the menu and we have implemented this seen in Figure 2.

For a complicated site such as MyUCLA labels are vital, there clarity and usefulness should allow users to navigate to their desired resources on a straight path without facing errors and having to spend time going back and forth in between links. Our proposed solution to making the labels clearer is adding a brief description of the content available before users actually click the label, our implementation is seen in Figure 2. This additional input provides users more helpful documentation in making them feel secure about their decisions and that they are on the right path when navigating the site. Confident users is desirable as they are more likely to continue using the site and have positive experiences. During user testing with this feature implemented, one user asked, "why isn't the label sufficient enough to know what I want to do so then I don't have to read more about it". The user made a good point about tradeoffs in this situation, our redesign provides more information in an effort to make things clear but clogs the page with more text reducing the minimalist design approach of modern web pages.
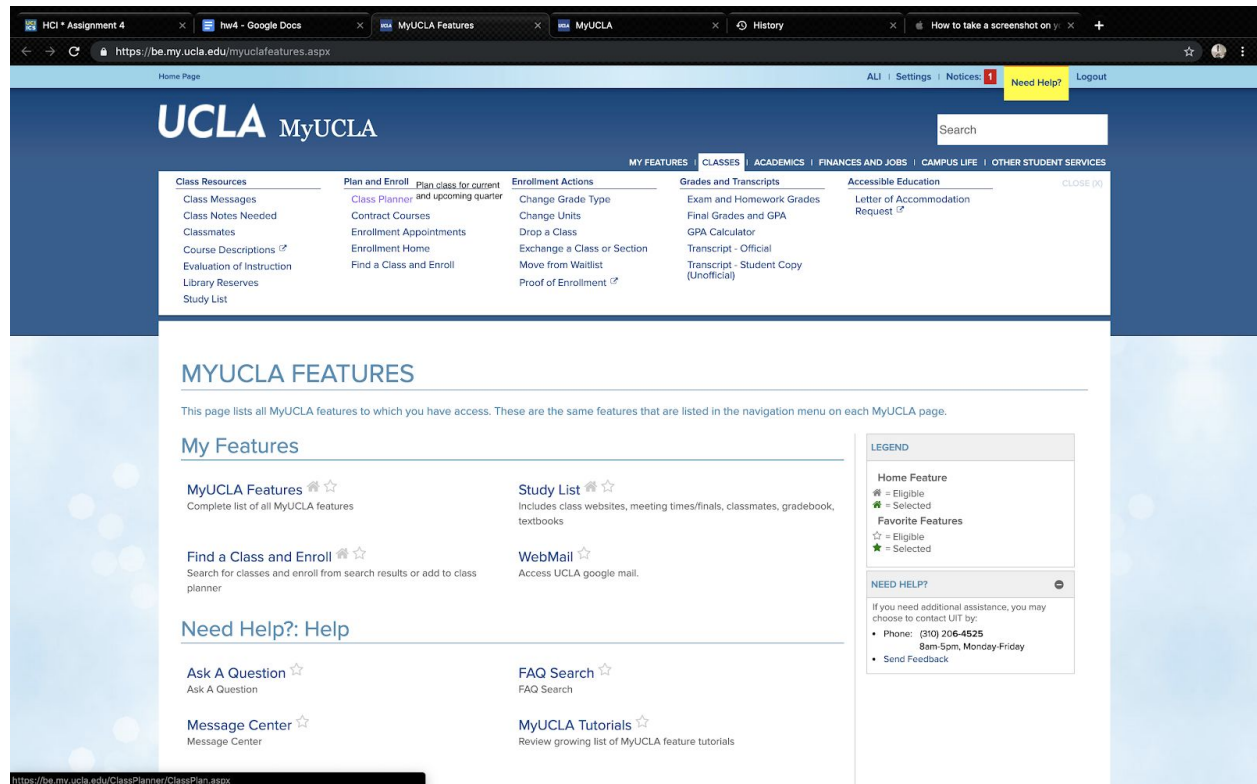
Figure 2. The mouse is hovering over 'Class Planner' so a short description of this link has appeared next to the link so the user sees a brief description before clicking on the link.

Still on the issue of addressing confusing labels, users had trouble finding the desired student organization because they followed similar labels that did not lead them to the expected sites. The prime example is that of the "groups" and "student organizations" labels. Our solution is to allow branches of a hierarchy to converge and connect to each other whenever appropriate. The branch of "Student Organizations" under "Student Organizations" should converge to a branch under the "Social" link as shown in Figure 3. Users are unpredictable and have differing solutions for the same problems; therefore, by interconnecting similar links to related pages we create more than one path to reach pages. The addition of links between pages is a double edged sword that should only be used sparingly when links are very related as it can turn into a negative design features if pages have too many links leading to unrelated content. This solution is an alternative to the search bar feature as some users may in fact prefer to follow down the link hierarchy and MyUCLA should make that process as seamless as possible.
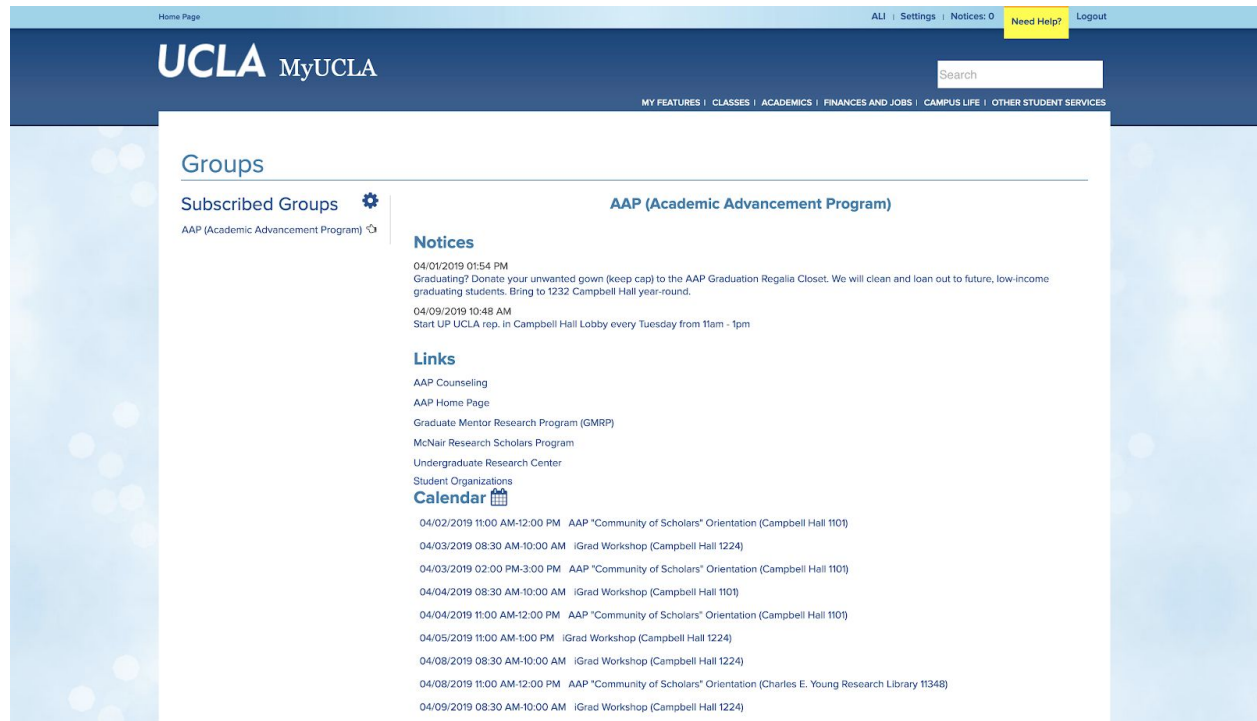
Figure 3. Here you can see the new design with the "Student Organization" link added on "Group" page within Links.

The second task performed during user testing was making users find an available course at a 10am time slot with a favorable grade distribution. Some users familiar with MyUCLA immediately stated that grade distributions for courses are not available on MyUCLA, and that time is not available as a filter when searching for classes. The users were incorrect in stating that you cannot find classes based on time, this feature is available under the advanced search option. To improve usability we suggest making the feature more prominently visible as shown in Figure 4. A feature that is too secluded and unaware to the user does not serve any purpose, our suggestion is due to the fact that time is a very important factor not an "advanced" option for students picking classes. Perhaps it is possible that the implementation of the feature seemed advanced to the software developers and it was placed along with other miscellaneous and technically complicated features under the "advanced" label. Placing time based search beside the main class searching display will dramatically increase usability. Our users unaware of the feature restored to a "guess and check" method which puts a heavy time and memory load on users as they iterate through offred classes searching for one that fits their needs. Making time-based search accessible will give users the ability to increase efficiency for the task of planning out classes. It is more likely for MyUCLA to overlook design flaws since students must use MyUCLA to create their class plan, essentially MyUCLA has a captive userbase.

Figure 4. Class lookup modified to support a time parameter

Additionally, it is true that there is no current way for students to find past grade distributions for a course on MyUCLA. Oftentimes, students enroll in classes solely based off of the grade distribution, and at a minimum, it is a paramount factor that students consider when enrolling in courses. Students have to rely on third-party websites such as BruinWalk in order to gather this information. We propose offering grade distributions built into the class detail pages as shown in Figure 5 and Figure 6. Usability will improve as users will have access to a high demand feature, in a location where it is to be expected. Users will also be able to avoid having to access a third-party site due to the incompleteness of desired features on MyUCLA.

Figure 5. Class information for CS33 displayed, as would be seen for a student enrolled in the class
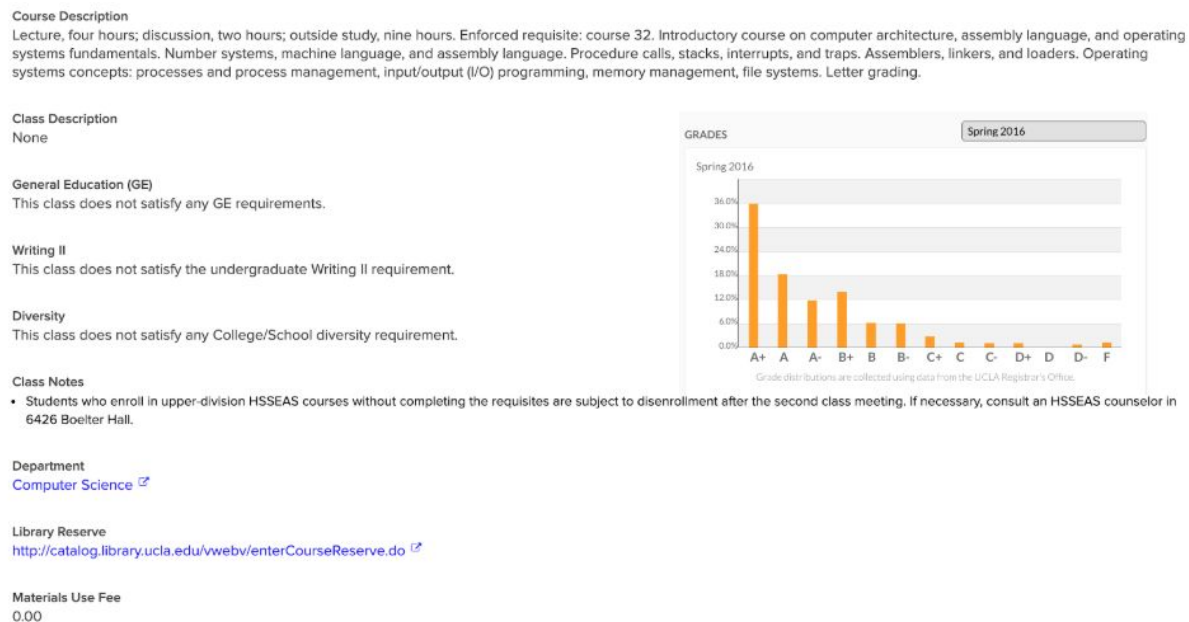

Figure 6. The class detail page contains the grade distribution table for the class per various quarters.

Lastly, we made users find their past grades and count the number of A's they had received. Although there is no statistical reporting tool for counting letter grades, the users were able to quickly access their transcripts and proceed to manually count the letter grades. Our proposed redesign is adding an option on the unofficial transcript to provide a quick sum of grades received. This redesign is shown in figure 7. The summary would improve the time to complete the task, because it is often the case that seniors and upperclassman need access to their grades for job applications, graduate school applications, scholarships etc. The more classes

users have taken the longer it will take them to complete this task; therefore this advanced piece of information can be quickly catered to users. Although not a critical feature it is an attractive personalization feature on the site as students tend to deeply care about letter gradings.
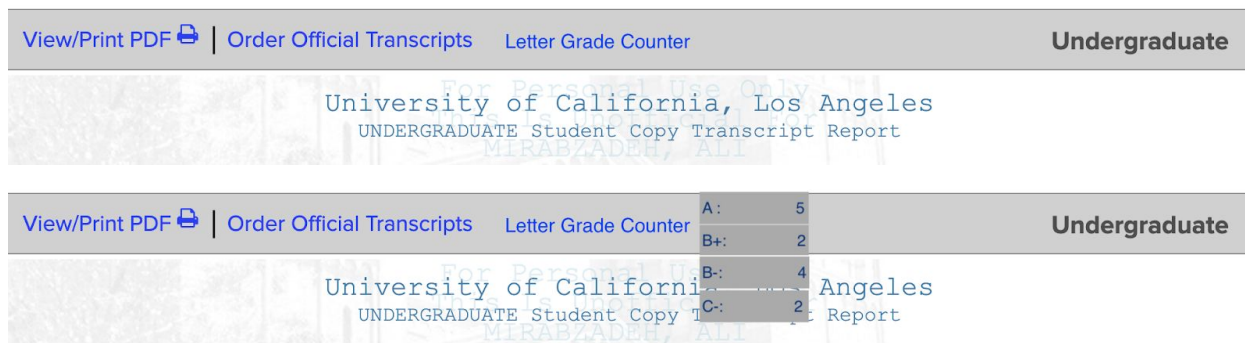

Figure 7. Students can get the count of each letter grade on their unofficial transcript. The Letter Grade Counter option can be hovered over to see the letter-grade counter information.

To reiterate our proposed changes are based on the user testing that was performed using the walkthrough usability guidelines (full usability report below in the index). We believe that our proposed redesign changes can help MyUCLA in two major ways those being efficiency and overall better user centered design for undergraduate students at UCLA. By moving the time-based search from advanced features to the main page will give students a powerful tool in narrowing down class choices and thus reducing the overall time it takes to schedule classes. By including grade distributions on the class detail page, students will have direct access to critical information previously only available on the third-party site Bruinwalk. For full completeness of user testing we would again perform another iteration of redesign to address the new issues that have been brought up or left unaddressed from the previous cycle.

Index

Website: my.ucla.edu

Student	Task: Searching for a Muslim organization on campus.	Task: Finding a 10 AM course with a favorable grade distribution.	Task: Find how many classes in which you have received an A since you enrolled at UCLA.
Third-Year Biology Major	**Process:** Decided to click on campus life, social, then groups. Didn't know what "subscribed groups" meant, and started to think he was in the wrong place. Went back to campus life and clicked student organizations, which took a while to load. Then searched Muslim in the search bar for organizations and found it.	**Process:** Question: "Does this mean I need two tabs?" Clicked on classes and class planner then went to the drop down menu and the fall quarter future plan. There were no classes offered so he went back to spring quarter. Question: "Does it matter what class it is, or just the fact that it's 10 AM?" Went to "search by" in the drop down menu and looked for whether or not time is an option, and it	**Process:** Comment: "I've actually done this before." Clicked on academics, then under academic profile, clicked on degree progress audit report. Then it said "Continue to DARS" so he did that and ran an audit. Comment: "I don't know what

	Keystrokes: 7 **Difficulties:** There are so many options under campus life. The student organizations part is obscure. Thought it would be under social, so he found it to be very disorganized. **Time:** 1:59	wasn't, so he searched for a GE course instead. Chose scientific inquiry for the subject and life sciences for the subject. Went one-by-one looking for a course that was at 10 AM. It took four courses to finally find one that was at 10 AM. Comment: "It's super hard to do this by going one by one for every class." To find the grade distribution, clicked on "Lecture 1" and looked for more information in the class details. It only has final exam information, requirements information, etc. but no grade distribution. Comment: "I don't think either of these are possible on myUCLA." **Keystrokes:** 22 **Difficulties:** Can't organize the class search by time - have to go one-by-one which is tedious. Even if you find one, myUCLA doesn't provide a grade distribution, so students can't differentiate professors just on myUCLA. **Time:** 3:50	any of these stuff means, so I'm just going to run the audit again." After three refreshes, it finally found the audit, so he then viewed the audit. Then there was a tab with audit results and course history, so he tried course history. Comment: "Here are all my grades in all my classes, so I'm just going to count them one-by-one" **Keystrokes:**7 **Difficulties:** Main difficulty is just counting the number of As one-by-one. **Time:** 2:32
First-Year Computer Science Major	**Process:** Had difficulty deciding where to start. Clicked on every top tab, then eventually chose student organizations under campus life after investigating everything. Comment: "What is this?" Found the search button, then searched Muslim. **Keystrokes:** 8 **Difficulties:** Just did not know where to start in general. Had no prior experience with this, and the website is not intuitive. **Time:** 1:06	**Process:** Question: "Can I even do this without BruinWalk?" Went to classes, then "find a class and enroll". Clicked on the advanced search. Question "Is it a one hour class?" Clicked through the page. Question: "Do I have to click through everything? Which subject? Any class?" Had difficulty searching for a specific class. Did not know how to search for a general 10 AM class without choosing the subject. Was able to narrow it down for a specific subject. Gave up on looking for the grade distribution. **Keystrokes:** 17 **Difficulties:** Did not know how to generalize a course search without typing in a specific course. Found the course search process to be too detailed. No way to find a grade distribution. **Time:** 3:17	**Process:** Comment: "This should be easy, I can just go to the transcript" Went to classes, then transcript. Knew this because he already sent his transcripts for a program. **Keystrokes:** 4 **Difficulties:** No difficulties in completing this task. **Time:** 0:25

Third-Year Molecular and Cell Development Biology Major	**Process:** Tried to find some sort of search mechanism but couldn't. Went to campus life first, but couldn't find a way to search for the organization. Clicked on "other student services", but decided to go back to campus life. Went to groups, which is under social. Comment: "I'm going do 'command F' to search. Wait, there's nothing here. I'm going to go back again." Realized it's not under campus life. Found student organizations, found the search in student organizations, searched for Muslim and found it. **Keystrokes:** 11 **Difficulties:** The website is not intuitive and it was hard to find the student organizations link. **Time:** 2:01	**Process:** Comment: "I don't see a way to search by time." Started with class planner, searched by subject area using a random subject, chose a random class, and looked one-by-one for classes that start at 10 AM. Found a course that started at 10 AM. Question: "Is it even possible to find grade distributions on myUCLA?" Looked around in the course information, but could not find any information about grade distributions. **Keystrokes:** 14 **Difficulties:** Couldn't find the grade distribution on myUCLA itself without using an outside application like BruinWalk. Also no way to search by time, so had to keep doing a guess-and-check until a random 10 AM course was found. **Time:** 1:00	**Process:** Started with the academics tab, realized it was not there. Then went to classes, then transcript. Comment: "I'm just going to scroll through my transcript and count the number of As one-by-one. Student is familiar with how to reach the transcript from beforehand. **Keystrokes:** 5 **Difficulties:** Only difficulty was scrolling through the transcript to manually look through and count the number of As. **Time:** 0:39

Usability Evaluation Report

Our application is my.ucla.edu, a website which UCLA students use on a daily basis. The website allows for students to do student specific tasks like check their grades, enroll in classes, pay their tuition, among other tasks. There are flaws though, and these flaws have been exposed through an evaluation of the website, which consisted of users performing three non trivial tasks: searching for a Muslim organization on campus, finding a 10 AM course with a favorable grade distribution, and finding how many classes in which you have received an A since you enrolled at UCLA.

One major problem with this website is the fact that it does not offer a search capability on its home page. The lack of a search feature led to many problems when running our tests, especially the one that required searching for a Muslim organization on campus. In section 4.2 of the Farkas & Farkas paper, it is stated that "A search facility should be provided in all but very small Web sites," and my.ucla.edu is a large website that does not have search functionality in its current form. This should thus be implemented in order to ease a user's search of the site. Additionally, the website is very confusing and not intuitive. As the third-year biology major mentioned, it was not clear what the link to "subscribed groups" entailed. Section 1.3 of the Farkas & Farkas paper states "Be sure that all links clearly indicate their destinations"; in this case, "subscribed groups" did not "clearly indicate [its] destination. This was because there was

no way of seeing information about the specific links. The only way of seeing what a link entails is by clicking on the link, looking through what the link offers, and clicking the "Back" button once the user realizes that he does not want to be on that specific page. Each of our users complained about the disorganization of the website and the fact that it can be quite complicated to use. A solution for this issue would be displaying a description on the screen over the mouse icon when user places their mouse over a particular link.

There was also a lot of confusion when it came to searching for the Muslim organization on campus; this stemmed from not knowing where to search, as the website has many different links regarding student groups. Thus, the user may attempt to complete the task by following links that seem reasonable, but do not lead to the correct final result. In this case, it could be anticipated for users to look for Muslim student groups under both the "Social" and "Student Organizations" categories. Section 2.3 of the paper states "Allow branches of a hierarchy to converge— when appropriate." The branch of "Student Organizations" under "Student Organizations" should converge to a branch under the "Social", but it does not. This limits the usability of the website, because it is not illogical for a user to search for a group under the "Social" tab, as student groups are a social aspect of UCLA. It is beneficial for there to be more than one way to complete a task because different users may have different ways of thinking which means different ways they plan on executing what they want to do. For example, one thing that myUCLA does well is having two methods to check grades - the degree audit report and the transcript. In our evaluation, we saw that one user used the audit report and two users used the transcript when counting how many classes in which they have received an A since they enrolled at UCLA. Therefore, specifically for the "Social" tab, there should be a link to "Student Organizations" as both of these branches are closely related to each other.

In terms of searching for classes, the website does not offer much functionality outside of searching for a particular class. Thus, it is mostly useful only if the user knows which particular class they want to enroll in. The third-year Molecular and Cell Development Biology major commented that there was no way to search by time in the class planner and the first-year Computer Science major also noticed that the only way to do this was so search every class one-by-one. This is very tedious and basically an impossible task for a student who simply wants to find courses that fit their schedule. Many students have other time commitments throughout the day such as work, clubs, or sports, so being able to simply search for times that are convenient for them to take classes and eliminate ones that cannot possibly fit in their schedule is imperative. Right now, this functionality does not exist in the class planner, and the way that all three of the students we had tested reacted was just by the method of "guess and check". However, it does exist in the advanced search portion of the "find a class and enroll" section of myUCLA. This feature is very obscure, though, and it is difficult to find. The majority of students at UCLA use the class planner to enroll in classes, and this also showed in our experiment, as two out of the three users immediately were not even aware of the "find a class and enroll" section's advanced search feature. Therefore, there should either be a link to reach the "find a class and enroll" section's advanced search feature within the "Class Planner" or the functionality of the "find a class and enroll" section's advanced search feature implemented within the "Class Planner." Additionally, there is no current way for students to find past grade distributions for a course on myUCLA. Oftentimes, students enroll in classes solely based off of

the grade distribution, and at the minimum, it is a factor that students consider when enrolling in courses. Students have to rely on external websites such as BruinWalk in order to gather this information. myUCLA should have its own built-in course grade distribution history that is displayed when one clicks for more information regarding a particular course. This would help students make more informed decisions when enrolling in classes.

Lastly, there is no quick way of seeing past grades and statistics easily. While students could use DARS or the transcript, it could get complicated for third and fourth year students who have a lot of past coursework they would have to sift through. There may be scholarship or club opportunities that require students to have received a certain amount of As in their courses, so having a "Grade Statistics" link in DARS which has a section with a counter that displays the number of each letter grade in which a student has received would be beneficial.

On the other hand, there were a lot of great parts to my.ucla that are implemented well which makes its usability more. One example of this is the use of secondary links. Farkas & Farkas paper states in 2.2 that a more useable website would "Supplement the primary links of a Web site with secondary links—when appropriate." For example there are supplemental links in the category of "Classes" that allow for the user to find the "Class Planner" link. This allows for quick access from whichever page a user is on to important nodes located deeper in the hierarchy of a specific area of the site. In addition, this connects a group of these closely related nodes by creating these systematic secondary links. As shown with the three students who tested the website, when they looked for a Muslim organization, these secondary links helped to find the category the user should use (Student Organizations under Campus Life) in a much more simple manner.

Another example of how my.ucla has good usability is based on 2.4 in Farkas & Farkas paper. 2.4 states that a usable web site would, "design the interface to readily reveal the underlying information structure." This is clearly done with all of the links. For example, if a user wanted to find anything related to their own academics, they could go to the "Academics" link, followed by the "Academic Profile" header. This allows for easier access for a user to find a specific link that they would like. This is how the Third-Year Biology Major had found the number of A's that he has, and it proved to be effective to have this labeling method.

The final example of how my.ucla has good usability is based off Farkas & Farkas' 4.1 when they state that a site should, "employ site maps to show the global structure of a site and to provide direct access to nodes." In my.ucla, there are site maps that show on the top of the page which pages a user is at. For example, in the "Class Planner" page, the "You are here" marker is shown as "Class Planner" at the top of the page. This makes the site map much more effective as the user, at all times, can see where on the site they are at. The third-year Molecular and Cell Development Biology major used this in particular to make sure she was searching in the right area when looking for a Muslim organization.

In conclusion, my.ucla is a useable website, however, there could be a few major and minor improvements that would increase its usability.

<u>Attributions</u>

Edgar Lopez
- Proposal report

Aadil Ali

- User testing
- Usability report

Isaac Iguelmamene

- User testing
- Usability report

Ali Mirabzadeh

- Redesign Prototype