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# Bringing new life to Ulife –

## Exploring a redesign of the University of Toronto’s Student Events Portal

**Project Phase IV** - Usability Study Evaluation  
**Team Simplii**

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**Abstract**

In this paper, we examine the usability of ULife - the official University of Toronto site meant to contain a directory of student clubs, organizations, activities and opportunities on all three campuses. ULife has a lot of important information about clubs, events, and opportunities, but most of the relevant information is obscure and hard to access. Here, we present a redesign that aims at improving the usability of ULife in accordance to Jakob Nielsen’s five components of usability - Learnability, Efficiency, Memorability, Errors, and Satisfaction. The initial redesign was informed by a survey collecting feedback on the current ULife design. We then constructed a series of tasks for that we wanted users to be able to easily do in the redesign, then conducted a final usability study asking them for their impressions via a questionnaire. The redesign resulted in an overwhelmingly positive response from participants, indicating that it is much more usable and that they would likely to use it to keep up to date with campus events and opportunities. In the following report, we examine the motivations behind the redesign as well as the structure of our inquiry including surveys, questionnaires and data analysis. We explain the insights, limitations, and conclusions that we gathered from the data and offer suggestions for further improvements to ULife and our redesign.

### **Initial Task Description**

*Responsive Design:* We found that responsive design for mobile interfaces was an important feature that was missing in the current implementation [1].

*Error Feedback:* The error feedback also lacked clarity which Gong emphasized is crucial to the user experience [3].

*Website appearance streamlining:* Following in Wiedenbeck's footsteps, we also implemented more iconography and familiar interface patterns [2].

*Item Grouping:* Item grouping was another needed fix we discovered in our research [4].

*Pagination:* Lastly, revisiting pagination was done to account for Nudelman's explanation of how users go through pages for information [5].

### **Author Keywords**

Ulife; Nielsen; Interface; Prototype; Questionnaire; Future.

### **ACM Classification Keywords**

CSS. Human-centered computing: Human computer interaction (HCI).

### **Introduction and Problem Statement**

Ulife is a central website of listings for campus organizations and opportunities across the University of Toronto. The thousands of entries include film appreciation clubs, debate societies, sports teams, social activism groups, drop-in classes, and research opportunities/awards. Ulife is the primary way for students to find out about on-campus activities online, but it suffers from a severe lack of usability due to unintuitive interface design, poor information clarity, and deviance from UofT style standards. Due to this, students are often misinformed or completely unaware of important clubs, activities, and events that are happening throughout campus. Redesigning Ulife is key to reigniting students' interests in on-campus events and increasing engagement rates across the student body.

### **Current Ulife website:**

<https://www.ulife.utoronto.ca/page/view/slug/about>

### **User Requirements and Prototype**

The User Requirements survey can be accessed through Google Forms [here](#).

Our study analyzed the initial task areas that we wanted to consider. Of the 48 response we received, some of our key findings related to pagination, with a third of responders preferring unlimited scrolling. We also found that "google-able" error messages were preferred and that smartphones were a primary method

of interacting with sites. Significantly, 75% of participants had never heard of Ulife prior to the survey. In terms of grouping, around a fifth of responders wanted the ability to sort by club size and how long the club has been around for.

In conducting this research, we sought out people that met our target audience, primarily young university students. Of those we surveyed, 15% were club organizers reflecting the fact that there are often more club members than executives and other leaders.

In designing our prototype, we considered three core user functions in addition to the gathered data:

1. As a student I want to explore and apply to join all the clubs on campus.
2. As a student I want to be able to explore award opportunities available to me
3. As a group leader I would like to post public events regarding club activities or positions to everyone
- 4.

### **Prototype Link:**

<https://xd.adobe.com/view/74a602c9-5759-4a6f-4340-7fb08206ba85-0297/>

### **Usability Study**

#### *Task Design*

Participants were asked to complete the aforementioned 3 tasks using the interactive prototype.

**Task one:** Find information on a campus club and then join it.

In task one, participants were required to navigate to the All Groups page of the ULife website, review the group information and then click on the 'Apply' button

**Task two:** Find information on a financial award opportunity and check your eligibility for it.

In task two, participants were required to navigate to the Awards Opportunities page and find out the specific requirement for a specific award.

**Task three:** Create and publicly post an event for an existing club.

In task three, participants were asked to find the Post an event page, fill out the event information and submit the event.

All tasks were required to be completed individually without any help. If the participants were to have become stuck, they were told to take whichever step(s) that they think may lead them to the correct page.<sup>1</sup>

#### *Methodology*

We distributed questionnaires to University of Toronto students to conduct the usability study. Each participant was required to complete the 3 tasks using our interactive prototype. Following each task, they would complete task-related questions, before resetting to the homepage and continuing to the next.

Afterwards, participants were asked to fill out some general questions regarding the overall user experience. The questionnaire was designed to determine the learnability, efficiency, memorability, errors and satisfaction of the new Ulife design based on Nielsen's 5 component of Usability. It also considered missing options and whether the prototype accurately simulated real-life conditions. The study was done via a 4-part questionnaire with in-person supervision and timing of certain sections.

#### *Demographics*

We specifically selected current students in University of Toronto as participants because they are the target users of the ULife website.

To prevent bias, we randomly selected students across the campus as participants for the usability study.

#### *Questionnaire Details*

We designed and created an online questionnaire using Google Forms.

The task-related questions were designed to determine:

1. How easy is it to find the page related to the given task?
2. How long does the participant take or how many steps does it take to complete each task?
3. Can the participants complete the task again from memory without errors?
4. Is the design intuitive?
5. Were the available options and the features sufficient?

After the participants completed all tasks, some general questions were asked to determine the overall user experience of the prototype, including satisfaction of use, error prevention and recovery, as well as if they would use the new prototype to keep up to date with club activities, club events and awards application instead of current methods like Facebook, Twitter and other social media. It also left space for some more open-ended suggestions for improvements.

#### **Results**

The 19 results from the questionnaire give us an idea of the usability of the new prototype. The first task the user had to complete was to "find information on a campus club then join it." Participants were generally satisfied when completing this task with the majority (84.2%) able to find clubs without help. The same enough also found the information about the club details to be sufficient, though there was only a tenth

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<sup>1</sup> Note that the testing was still supervised, and guidance was eventually provided if absolutely required

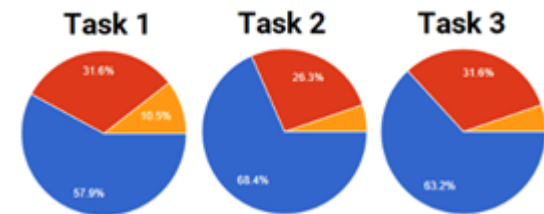
of responders who considered it exceptional. Users were also able to learn the design quickly with no participants finding it hard to complete. Over half of the participants (57.9%) felt they were able to complete the task again by memory while only 10.5% did not. We also found that most users (78.9%) considered our design to be efficient as they reported that the task could be accomplished with few steps.

The second task the user had to complete was to “find information on a financial award opportunity and check your eligibility for it.” Users were slightly less satisfied when completing this task compared to the previous with 78.9% of participants not needing help when finding the awards. Critically, more than half of the participants (68.4%) needed more than 5 seconds to identify whether they were eligible for the example awards. Still, users were able to accomplish this task easily with 63.2% of participants finding it easy to accomplish the task and two-thirds of users reporting they would be able to complete this task again from memory. This task was still efficient if slightly harder to parse, with roughly three-quarters (78.9%) of participants reporting that the task was accomplished in few steps and no users reporting that it took a significant amount of effort.

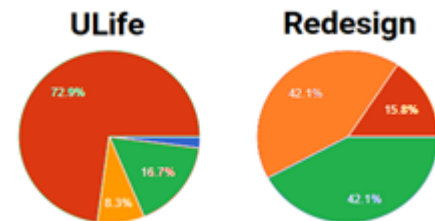
The third task the user had to complete was to “create and publicly post an event for an existing club.” Users were very satisfied when completing the third task with 73.7% of those surveyed able to find the event posting page without help and 84.2% being able to fill out info for and post the event of a chosen club. Just 5.3% of participants thought that the options of the event form did not include all the important details. 84.3% of participants found the visual design appealing. Most users (73.7%) found it easy to complete this task and none found it harder than average. Participants once again maintain efficiency and memorability with 63.2% reporting that they could complete the task again from

memory and a similar percentage (68.4) feeling that it took just a few steps to accomplish, with no one responding that it took more than an average amount.

Overall, the participants had a good experience when using the prototype with 84.2% of participants saying that the tasks accurately simulated what they would want to do on the site. While satisfaction wasn’t always at a maximum (on a 1-5 scale), 0% of the participants were dissatisfied when using this prototype. Importantly, majority of the participants found it visually appealing with nearly 90% of participants choosing either 3 or 4 or 5 on the 1-5 scale we used to measure this.



**Figure 1:** How memorable participants thought doing each of the tasks was, referencing Nielsen’s memorability component. Blue indicates it was easily memorized, red indicates average difficulty and orange represents a user who was uncertain if they could repeat the task.



**Figure 2:** The charts above compile info from the user requirements survey and the usability study. They represent how many participants would use the original version of the site versus the redesign. Green means they would use it alone, orange means they would use it with other social media and red indicates that they would not use it.

## Limitations

There are several key limitations to the study that stop us from having a perfectly clear picture of how we should refine our prototype even though the existing results are still ripe for analysis. The biggest weakness is deeply tied to the nature of using a questionnaire. Mainly, by writing a limited set of questions from only our shared perspectives, we are inherently unable to consider all the possibilities or responses that people may want to give. We have to decide what choices are available for each question, meaning that responses are forced to fit into this mold, potentially locking out answers that might've provided a different but still useful perspective.

This limitation also applies to the range of questions we provided. While we felt that our questions were comprehensive it is impossible for us to think of all the possible angles of things that we could ask about our prototype experience. Thus, in the same way we could be overlooking valuable data sets. This is something we tried to remedy with the inclusion of open-ended questions which hope to catch some of these errant thoughts, but as we'll discuss below how these open-ended questions are also partially hamstrung by the format of data collection.

Aside from the fact that these open-ended questions suffer from the same aforementioned limited perspective, we noticed that few people had anything to say within the questions we did provide. We think this is because of the fact that in a quick questionnaire where participants are conditioned to click through, they may not feel too incentivized to type out a longer response. We set-up our open-ended questions as optional because of the requirements of google forms and because we generally only looked for open-ended suggestions if people had problems. Thus, people could and did skip over it. Aside from laziness, we believe another reason for our limited open-ended responses may be because they weren't given enough prompting

to think of things they would add. In a direct interview, the interviewer can ask additional questions to inspire further thought on a topic. In a survey like ours, we can only leave the question and hope that people are able to think deeply or from different angles without being pushed to do so. As we see with journalism interviewers often it does take some digging to get the average person to really say (or in this case write) what's on their minds.

Another limitation was more tied to the prototype. By design, it only accommodates the 3 separate tasks in a vacuum. That is, it allows the participants to do the three assigned tasks from the home page and that's it. It's not necessarily flexible for different inputs, errors that would come up in different contexts or even the use of the site in a way that might mirror a user that falls into multiple categories. For instance, it can't capture the range of use that someone who is both a club organizer and member might want, jumping back and forth because of tasks. For this reason, the survey was split up into responses on each of the 3 individual actions but it is unable to gather data on more mixed-use cases or what happens when people try inputting data or catching errors that aren't as pre-determined.

Finally, human nature is an issue with a survey like ours that runs through 3 separate tasks and is fairly lengthy. There's the possibility that as the questionnaire wore on, participants started to lose interest and engage less fully with the prototype. While this is impossible to prove or measure, it's a definite potential factor to consider. As a result, some of our data may not math real-life cases where people are fully engaged with what they're trying to do on the site. Some of our members have done paid studies that have involved 20 minutes of the same repetitive tasks and they noted a concrete attrition in attention over that time period. The same could have happened with our battery of tests.

### *Other Limitations*

1. Limited time to finish survey, meaning we have to consider the number of questions to put on the questionnaire.
2. People may choose inaccurate answers when they do not want to spend energy to fully understand a question.
3. Participants may not feel comfortable providing answers that may seem to offend the survey giver.
4. Due to the unpopularity of ULife, the comparison between the two may not be accurate due to the lack of experience using ULife.
5. Conducting survey within peer groups will result in a bias.
6. Requesting participants to do three tasks in the same order will result in an order bias.
7. Survey questions may be interpreted differently by different people. For example, on a ranking scale from 1-5, a 3 to one person may mean a 4 to another.
8. Participants may have a hidden agenda and be dishonest in answering the questionnaire.

### **Future Work**

#### *Information Presentation*

One area of potential improvement is information presentation. User found information presented to be mostly sufficient (84.2% on task 1). Certain descriptions also took lengthy reads to be fully grasped (52.6% said tasks two required 6-29 seconds to reading understand whether they were qualified for an award).

To fix this, we could highlight important text on pages to help users better understand what is going on. This would help users quickly skim through text content and understand what they need quickly. We also noted that few people found the club information truly exceptional meaning we could attempt to gather information beyond the expected basic information. This could mean club content like flyers and promotional videos or even anecdotes and comments from club members and

leaders. As well, per user request we could include a list of when and where the clubs meet-up alongside any events they currently have planned on the pages themselves, making it very easy for students to quickly figure out if a club will fit into their schedule.

We also found that task two, finding student awards and other opportunities had more people (15.8%) needing help to find it. We could rename our opportunities tab as awards/opportunities for more clarity. Similarly, one of our open-ended response for website satisfaction noted that it would be more understandable if we changed the name group listings to be club listings instead.

#### *Extra Options*

Significantly, we found that nearly half (47.4%) of users wanted more options for posting events, implying that we need to provide more in this area.

As for what these options could be, our open-ended question regarding extra features provides some insight. One is the ability to create a new club from the event posting page if the club doesn't already exist. Another would be the ability to choose a location or book a room while creating the event. A dedicated field for the specific time of events instead of just a general description area was also requested. These are all possibilities for future improvements.

#### *Error Encounters*

Errors were also moderately effective. 42.1% stated a small bit of effort was required to get back on task and 52.6% had a rough idea of when errors occurred. To enhance the performance of the errors, we could add more descriptive error messages (i.e., errors could state more clearly what the user is encountering and exactly why it has come up).

### *Design Language*

The Adobe design we've created is an upgrade on the existing ULife design. The main UofT website takes a different approach (i.e., with blue and white as the primary colours and a persistent navbar that follows the user as they scroll.

We could bring these elements to our upgrade so it's more akin to the general UofT website design, thus being more familiar to the user.

### *General Upgrades*

We could further enhance our design by creating original icons and better streamlining our design patterns. The current upgrade is practical but could be further improved with original assets that better fit together as opposed to the templates we've used. This might help improve our visual appeal ratings, which averaged around 3.4 on our 1-5 scale for the event posting section and 3.6 for the site overall. Not terrible, but no superb either.

For a more functional prototype or alpha product, we could develop it further using a full-fledged UI implementation tool like React or Bootstrap. As our original user requirements study noted, few people had heard of ULife so in a practical sense we could focus on more advertising campaigns. This could include social media blitzes, communiques from the department of student life to school emails and advertising/linking of the site on more commonly used school interfaces like Acorn and Quercus.

### **Appendix**

Here are the artifacts we used to gather the relevant information for the usability study, the questionnaire and the consent forms, with participant identifiers removed as required.

Link to usability study:

<https://goo.gl/forms/ufxhtX0FJMhXLnd2>

Link to consent forms:

<https://drive.google.com/open?id=1dcpQT2dsDMqFZ3guU9tcByN5yvn0VVM>

**Note** that the total number of consent forms differs from the total number of results. We ended up with more consent forms than responders because we accidentally created a new form midway through instead of copying over the existing form to our work folder. Thus, some of the data was lost. We still had more than enough responders to analyze, but unfortunately, we missed out on a few results.

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